Vol. 23, No. 8 AUGUST, 1931

Journal of Home Economics

PLAY BEGINS AT HOME

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A NEW sort of budgeting is going on in thousands of American homes. It is the budgeting of leisure, of the recreation time that the family shares. Modern parents are realizing that just as it is important to plan the home food budget wisely, so a well-balanced use of leisure is vital to home happiness and to the development of their children.

A generation ago the home was naturally the center for children's games, for parties and neighborhood gatherings. Houses were big and rambling, with spacious porches and yards and inviting nooks for play. Charades took the place of today's movies. There were no automobiles to carry young people swiftly to another town or even another state for an evening's amusement. Parents had fewer demands on their spare time from outside the home.

The modern home has been called an "American plan hotel," convenient for eating and sleeping, but for little else. There seems to be all too much truth in the quip. But reports of home play activities from typical American cities present some appealing evidence to the contrary. Even in the city apartment or small suburban home that houses so large a percentage of families today, there is an increasing amount of real fun, because it is planned for by parents who realize that (as one father puts it) "The spirit of play does not come in and sit benignly at the fireside. It must be laid hold of and captured."

National and municipal aid is now being given to this problem of home recreation. The National Recreation Association, founded just twenty-five years ago to foster the movement for city playgrounds and recreation leadership, has of late years added a home play service. About one-fifth of the 20,000 requests for advice and literature that the Association receives annually relate to home play. A model backyard playground designed by the Association has been in great demand for con-

ventions of women's clubs, parent-teacher associations, and other groups. Its slogan, "the family that plays together, stays together" has been adopted with enthusiasm by scores of cities.

City departments of recreation, which have been increasing rapidly, serve as headquarters also for families who want information on games and songs and stories for the home, on how to lay out a backyard playground or what materials to give their children for constructive play. Home Play Weeks and campaigns or contests for backyard playgrounds have been held in scores of towns and cities. The City Planning Commission of Buffalo, New York, for instance, promotes a backyard playground contest each spring. In St. Louis the Parks and Playgrounds Association also holds an annual contest. Honors last year were won by a twelve-year-old boy living in a congested section of the city, who had turned his yard into a play paradise for all the small youngsters of the neighborhood. More than 6,000 families in Los Angeles asked their local Playground Department for information on home recreation during a recent three months' period.

A regular family play night is proving one of the most effective plans in the home recreation schedule. A certain night each week is set aside as the time when parents and children should join in games, story-telling, music, dramatics, and other fun together. In summer, supper is sometimes cooked over an outdoor fire. Parents find that the youngsters will keep this "date" religiously, provided Mother and Dad will. Boys and girls of the teen age have been known to refuse invitations to parties because "that's our play night at home."

Backyard playgrounds are saving child lives in this motor age. Not only do they keep the children contented at home, but they relieve the mother of worry. The most popular and essential piece of equipment for the home playground is the sandbox, which answers the small child's urge to dig and model. After this come swing, horizontal bar, and flying rings. Two or all three of these pieces of apparatus may be hung from one frame to save space. A table and bench for constructive play are also valuable.

In larger backyards, families have added to this fundamental equipment a slide and seesaw, a children's playhouse, a croquet ground or tennis court or miniature golf course, a little garden for each child to plant and tend, a wading pool, a horseshoe pitching court, and an outdoor fireplace for family picnics. The garage has been pressed into service by hanging a basketball goal or golf-driving net from the side of it or using the wall as a backstop for a handball court. Some families have

torn down the fences between their backyards to make one large playground, each family sharing in the cost of equipping the ground.

Play at home fills all the needs of the child up to seven years old. The older boy or girl needs also the experience of team play under leadership with other children of their age. The neighborhood or community playground answers this requirement and provides the space for active team games which most homes cannot supply.

The story is told that when the Boston "sand gardens," the first supervised public play places in this country, were opened in 1885, big hulking youths used to enter the playground holding tightly by the hand some tot who might, or might not, be "my little brother." This was the only way they could gain admission, for the playgrounds were for small children.

Now, communities recognize their responsibility to furnish recreation centers for citizens of all ages. From a philanthropy for slum children, the playground has become a municipal duty, considered by many cities as indispensable to the health, safety, and education of the average child as their school system. And from a movement for children, public reaction has expanded to include a variety of sport, music, drama, and art activities for the leisure time of adults.

Only forty-one cities had made a start in directed playgrounds by 1906, the year the National Recreation Association was organized. Now nearly 1,000 towns and cities maintain well over 13,000 playgrounds and other recreation areas under leadership. At the twenty-fifth anniversary meeting of the Association last April in the White House, President Hoover said:

> Your work today is of increasing importance because of the growing congestion of cities, on one hand, and the increasing leisure of our people, on the other. The whole recreational movement is one not only vital to public health, but it is vital to public welfare. The growing congestion of the cities presents constantly new problems of physical and moral and mental training of children, on one hand, and the growing leisure by shortened hours of labor presents increasing problems in provision of opportunity for proper use of increasing leisure for adults.

The city of tomorrow, Harold S. Buttenheim and Martha Candler of *The American City Magazine* predicted in a recent article, will provide for every small child a safe place for play at or very near his home; for every child of school age a playground near his school and within a quarter-mile of his home; for every adolescent boy and girl and young worker a large playfield, offering a variety of diversions; neighborhood playing units for family groups; extensive open country for holiday or Sunday

recreation in the environs of every city. "Home life and play, school and play, and work and play, will find their ideal balance," they stated.

A movement to set aside permanent play spaces in new subdivisions is gaining headway among real estate operators. Records are available of 527 subdivisions in 258 cities where playgrounds, parks, beaches, golf courses, and other recreation areas have been set aside in perpetuity for the use of the people. This plan has benefited not only the community, but the subdivider through quicker sales of property. Parents appreciate features for the safe play of children and for their own outdoor sport. It is predicted that the question, "Where is the playground?" will soon be asked by prospective home buyers just as they now ask, "Where is the school?" Radburn, New Jersey, the new "town for the motor age," has extensive recreation spaces as part of its integral plan.

Labor-saving machines will give to today's children, when they become adults, more spare time than the world has ever known before. The home, the school, and the community are facing an urgent opportunity to train boys and girls for the wise use of this leisure. More and more they are cooperating to give every child a chance to play some game well, to find a hobby in art or music or nature study, to make him "good company" for himself, so that he will never be bored at the prospect of a few hours to be spent without amusement.

Home life has a real challenge not only in preparing for this coming leisure, but here and now. In the rush and superficiality of a machine age, the home can take a growing part in fostering the spirit of spontaneous, creative, and really satisfying play.

HOME SERVICE WORK IN THE PUBLIC UTILITIES

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IN OUR present competitive social era, the strongest domestic stimulus operative in household habit alteration, and this is no cynicism, has been keeping up with the Joneses. Competitors in economic exhibitionism buy first the things which show. An automobile for proud display on the highway goes on the purchase list ahead of an electrical appliance for use in a perpetuity of privacy.

Inertia also helps to rationalize exhibitionist choices. Amid days of multiplied and complex duties, we are sluggish in our acceptance of an unfamiliar mechanical tool to replace a traditional one which the hand has learned to love. Service delivered from the electric power company to the home today is of quality superior to the degree of its skillful utilization by the average household customer.

Yet, in spite of customer backwardness, public emphasis on home health and comfort has developed a large market. For every dollar spent by the electric power company to provide current, the customer now spends two dollars for wiring, fixtures, and appliances. This volume of business has, however, not been the result of spontaneous consumer demand. It was developed by enterprising, and frequently high-pressure sales methods by manufacturers of electrical merchandise.

Justification for these sales programs, or their condemnation, lies chiefly in their effect upon the intangible values in our homes. No unbiased verdict can yet be surely rendered in either the negative or the affirmative. Unprejudiced opinion is probably safe in claiming that more good than harm has resulted. It is also even more probable that wiser consumer engineering in the merchandising plans of the future will reduce the undesirable factors in commodity development and sales methods, and increase net worth in terms of vital income to the consumer. The type and training of those now entering commercial work will largely determine how the balance shall swing in the next decade.

Home economics may be the deciding factor in this development both because of the high type of students attracted to it and, more especially, by the increasing soundness of curriculum content and emphasis. As a

corollary to better merchandising, and more specifically to encourage the goodwill-producing use of electrical appliances, many public utilities have established home service departments. Sometimes these departments have a separate place in the organization. More often they are a part of merchandising or sales promotion activities. It is quite well agreed, however, that their only part in increasing sales is indirect. Their efforts have been wholly in the field designated "home service."

Like most so-called educational work in commercial fields, their existence has been precarious and their growth in numbers and industrial standing so slow as, at times, to be imperceptible. Within the year, however, a new realization of their importance has arrived. There is now a well-defined tendency to consider home service staffs to be as integral a part of the utilities organization as meter readers or linemen.

Factors productive of the situation have been the sighting of a saturation point in customer use of product and an increasing consciousness of sounder merchandising within the industry. Combined with these are the need for increasing the load on each line, in the interests of cheaper service, and the fact that control of the industry is gradually passing out of the hands of the engineer and into the direction of the financier. All these, and others which might be added, are long-run influences. The more immediate causes for a changed attitude toward the worth and dignity of home service have eventuated from the market sag of 1929–30.

The first cause is financial. Under the stimulus of prosperity a thinning of equities has taken place among the public utilities. Any such thinning always emphasizes the necessity for stability of balance between productive capacity and sales. In the recent depression a spectacular falling off took place in the volume of industrial power, while domestic load showed a substantial gain. Home use of current was a needed stabilizer. The value of its development now stands revealed more clearly than ever before as a prime factor in the healthy balance of the electrical industry.

The second cause for support of home service departments is political. In a time of contracted prosperity there is widespread restlessness and an open ear for agitation. Anything which is, is suspected as a moving cause of what ails us. Emotion, not reason, is still the deciding voice of democracy. For every kilowatt hour sold, the domestic consumer votes 8.9 times as often as the commercial customer and 74.9 times as often as the power customer. Intangible assets of good will among domestic customers, therefore, must be guarded by business interests from the specious agitation of men who depend on votes for their jobs.

It seems probable, because of all these factors, that the new conception of the part which home service may take in public utilities development will create a demand for exceptional women qualified to do important pioneer administrative and interpretive service.

Mr. Harry Reid, president of the National Electric Power Company, indicated something of this future in his speech before the second National Home Service Conference in Chicago in March, 1931:

> . . . . your work makes you ambassadors between the public service companies and the homes of America. As such I believe that you are destined to play a part of increasing importance in the fortunes of our industry.
>
> It is also inevitable that the same activities shall play a vital part in the development of future American home practices and relationships.

Three types of training combine toward successful contributions in the home service field. Obviously the three types overlap. Preparation for this work, as for most attainments, is like the process of color printing, in which, according to a careful prearrangement, different hued inks are deftly superimposed to make a richly blended and harmonious whole.

The triple training for home service work consists of discipline in cultural experience, technical knowledge, and business practice.

Cultural experience, in its broad interpretation, is what chiefly determines the candidate's type and personality. Its raw materials are mined from environment both deliberately sought and fortuitous. These raw materials the individual must mold into a unique intellectual and emotional pattern. The combination determines, to a large degree, the power of the worker to marshal her own resources effectively as well as her facility in the art of transforming mere factual knowledge into dynamic leadership.

Education, following its hallowed medieval traditions, sometimes overstresses the printed word. Cultural experience, to escape lop-sidedness, must give equal weight to live men and to recorded opinion. It must include a sympathetic understanding of individual, momentary complications as well as a cool appraisal of theoretic generalities.

In home service, the study of the historical development of family life is desirable. It is even more vital to have a vivid insight into the case of Mr. and Mrs. John Jones who are trying to live with the mechanical equipment of a city apartment and yet express the conventions and ideals they inherit from their farm forbears. It is imperative that home service understand John Jones, Jr., who yearns to drive a car above his parents' income level. Home service must have a keenly creative sym-

pathy for Gladys Jones, aged eighteen, uncertain of her sophistication and wishing she could bolster up her wobbling self-certitude by the public production of a father with more of finished elegance and a mother with a more brilliant patina of modernity.

Another requisite for home service work is a genuine love for home duties. Any executive who has searched for staff material among home economics groups is appalled at the vicariousness of much of their household management experience. For some students, home economics seems to be, like fiction in literature, an escape mechanism by which to dodge stark reality by romantic description. There is a place for the theorist and for the laboratory worker, but it is not in home service.

Work in this field is a highly specialized form of practical interpretation. For this reason a wide range of interests and contacts must be maintained. These should contribute both the basis for insight and the materials for effective leadership. One of the most valuable contributions a teacher can make to her pupils, and chiefly by example, is the planned maintenance of a cross-section sampling of life. Most of us, in social activity, follow the line of least resistance. Gradually our acquaintance narrows to those whose interests, training, and standards of life coincide with ours. Then we concentrate together on this one outlook, and the rest of our fellowmen are seen only through that peep-hole. Social bigotry is an easy road but a fatal one in a profession involving public relations.

The same variety of intellectual contact is advantageous. There seem to be authentic signs that the greatest contribution which highly specialized study can make has been completed, at least in the teaching fields. Synthesis, productive of progressive activity, is now emerging.

Breadth of interest and variety of contact should, of course, be held in check by an exacting standard of finished performance. Mere breadth does not measure culture. That has more dimensions than one. There must be the profound sense of responsibility and high awareness of spiritual capital held in trust for the enrichment of the lives of others.

Two other closely related essentials in home service work are the ability to carry on cooperative projects with others, and an emotional maturity, impossible to shake from its serene balance.

Technical knowledge may be divided, for convenience, into general and specific sorts. General training should include emphasis upon the spoken and the written word. For an interpretive vocation, facility in expression is the keystone of effective work. There should be liberal practice throughout the academic career in careful, logical, accurate, and lively writing as well as in oral work, done standing, facing a group

of people. Public speaking is scarcely more difficult than private conversation, once the unfamiliarity of physical attitudes is converted into a routine affair.

Next to English, a training in the principles of pure design may be considered. Experience with the adjustment of visual balances, with the vitality of linear rhythms, and with the unity of nicely spaced agreements in form and color, affect the perceptions happily. Without entering the controversy as to the possible transference of skills, it may be safely claimed that design, properly taught, does give the student a heightened discrimination as to relative emphasis and an improved judgment as to proportion in both the analysis and the synthesis of practical matters.

For work in the public utilities the study of at least the elementary principles of economics is a primary requisite. Sociology and psychology are two other highly desirable curriculum inclusions.

Specific knowledge should include the general principles of physics and chemistry as well as their definite applications in the mechanics and dietetics of the household, and this must be understood to cover some mastery of household skills. Family relations as a special branch of social psychology is desirable as a seminar. Child welfare will also be included in a preparatory program, either as a separate course, or better, perhaps, integrated with the other social studies.

For home service women, business practice is the form of training least valuable in theory. Most executives prefer to have their assistants learn this part of their work by actual experience. The instruction, they feel, can be most effectively given "on the job," just as colleges generally agree that academic work must be taken "in residence."

The home service aspirant must, however, be certain that she understands her position in both its professional and its commercial aspects. Briefly differentiated, the two fields align themselves by contrasting emphasis upon motives. In professional work, skillful service has always been first and personal profit second. In competitive business, the profit motive has led. With the progress of modern organization there has arisen a third field which attempts the difficult and challenging art of holding professional and commercial objectives in a nice equity.

It is in this third field that home service stands. It offers a wide opportunity for professional leadership, combined with adequate financial rewards. For properly trained and qualified women, it is entirely probable that in the years immediately ahead, no field will offer better satisfaction for both the professional and the practical ambitions of creative workers trained in home economics.

MAKING A TEXTILE COLLECTION

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COLLECTING textiles leads us into some of the most interesting spots of Europe and America. Not only in the well-known shops of such cities as Paris, Florence, Vienna, and Munich, but especially at the fairs and markets of these and smaller towns can choice fabrics be found. A most profitable as well as diverting excursion may be made on any Sunday morning to one of the Flea Markets outside the city gates of Paris. If you take the metro to the Porte de Clignancourt, you can discover there, with the reason for the name Flea Market, an astonishing array of fabrics ranging from old brocades of Italy, Spain, and France, striped cottons of Tripoli and fabrics of the East, to bits of peasant embroidery or whole costumes. Almost no large town in Europe is without a smaller but similar market in its poorer quarter. If you are so lucky as to be in Rome for a gala affair at the Thieves Market, you will be able with astute bargaining to get gay bedspreads from Calabria, brocade from Persia, or an Indian sari. Perhaps you may find blue and white Abruzzi towels of the fifteenth century, but if none are to be had there or in the markets of Perugia or Arezzo you will find charming reproductions in the Perugian shops; and at any rate you can pick up peasant weaving that will introduce a fresh note into your collection. Buyers are still able to rout out a considerable number of quilted calico petticoats in Normandy, or even sets of charming bedhangings in Brittany. Visiting Wallach's in Munich always means increasing your luggage, for under one roof you find gathered temptingly priced peasant costumes from innumerable provinces, large and small pieces of embroidery, peasant caps and cap ribbons, contemporary linens printed from old German blocks, and hand-woven woolens striped in delightful colors.

Perhaps the greatest adventure of all is finding interesting textiles in out-of-the-way places in America. While good hooked rugs are still to be discovered among the numerous bad ones for sale at country auctions in the East, and while Appalachian Mountain women can occasionally be separated from their bedspreads, or double weaving can be bought in

Pennsylvania and Ohio, the West is not without nooks where such things are also tucked away. The writer was once surprised to happen on a beautiful Pennsylvania blue and white bedspread in a tulip pattern and marked 1836 in a taxi stand at Gallup, New Mexico, the most unlikely of towns for anything but Indian blankets or cow boy supplies. Perhaps there is no home economics teacher who has not had the fun of discovering an unusually lovely calico in a country or village store. As a matter of fact, the New York Store in Provincetown, Massachusetts, is said to have the largest line of calicoes in the country. Who has not found in a small department store a discontinued line of unusual textiles like India prints or Javanese batiks? Who has not discovered that a neighborhood attic discloses forgotten treasures in the form of quaint patterns, hand weaving, or old costumes? How proud the boy or girl or grandmother is when it is learned that the teacher likes a fine old quilt, bedspread, or wedding dress that the family has cherished! Whether the search leads to claiming scraps of interesting materials from friends or to selecting fabrics in an ultra-modern shop like the Wiener Werkstätte in Vienna, the primary necessity is a seeing eye on the part of the collector.

It would seem wise to begin collecting the materials offered by your own neighborhood. In the New Mexican school, for instance, a rich appreciation can be built up by a collection of ceremonial skirts, belts, and hair bands woven by the Hopis and Navajo and Chimayo blankets. These textiles, so frank in design and color, will lead to interest in countless fabrics of other times and regions.

In fact, the textile field includes some of the most glorious achievements of the past and present. We recall the beautifully patterned tapestries that kept draughts out of medieval halls, the glorious brocades that enriched the walls of Renaissance palaces, the reproductions of these that we use today, and the modern designs in upholstery and hangings that mirror our own twentieth century life. We remember the laces of the past and the multitude of dress fabrics changing as the seasons do. With so many textiles for our students to know, enjoy, or use, it often seems impossible to build up a representative collection in a few years.

We can simplify the problem, however, by agreeing upon the essential qualities our collection must have. No matter what its size, we surely expect it to be both inclusive and choice. The variety that makes for its usefulness should be of two kinds; first, a variety in the character of the textiles; and second, a variety in the kinds of good design. In other

words, we need textiles that say different things in different ways, according to their possible uses.

Turning first to what textiles say, we find a very obvious difference of expression between modern and traditional fabrics. We need some of the clear-cut, bold design of the present and some of the more easily flowing patterns of the past. But within the range of either modern or traditional we encounter some that are naïve, others that are sophisticated, some that are strong, others that are delicate, and so on. Each good textile, whether bought at an exclusive shop or discovered in a department store basement, has a distinctive expressiveness. Through its color, pattern, and weave it speaks of daintiness, directness, gaiety, or soberness, or perhaps a combination of some such qualities. Our collection, if it is to be inclusive, might well contain at least four groups of expressiveness: textiles that are dignified in spirit, some that show a graceful and demure feeling, some that give a striking sensation, and some that are direct or natural in feeling.

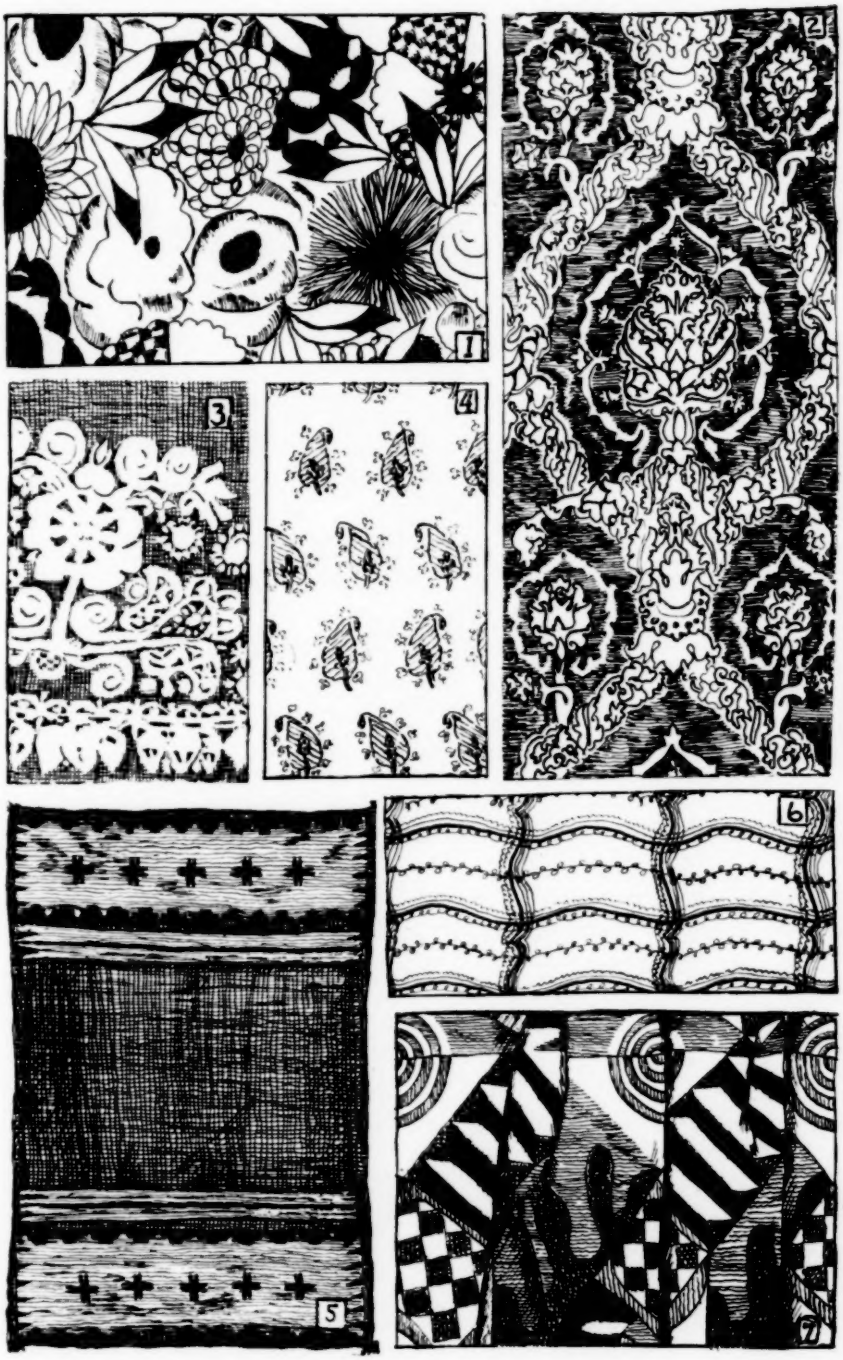
One good reason for seeking textiles that are dignified, demure, striking, and natural is that each of these qualities has its easily recognized counterpart in houses and in people. Another is that good use of textiles whether for home or dress depends upon our ability to put like with like in feeling, and thus establish harmony.

The seven accompanying designs were chosen to illustrate such qualities in textiles. They may be identified as follows:

Fig. 1. Modern dress silk, courtesy of Bianchini-Ferier
Fig. 2. Fifteenth century Italian velvet brocade, courtesy of the South Kensington Museum, London
Fig. 3. Peasant embroidery
Fig. 4. India printed muslin, courtesy of H. K. Garmirian
Fig. 5. Navajo blanket
Fig. 6. "Triolet," dress silk designed by Vally Wieselthier, courtesy of Contempora, Inc.
Fig. 7. "Oak Leaf," Lesher mohair designed by Ilonka Karasz, courtesy of Lesher Whitman and Company

We are familiar with the dignity found in the formal balance, high ceilings, and impressive mass of the Georgian mansion and Italian villa. We recognize the dignified woman as typically tall, dark, impressive, slow of pace and speech. Figure 2 shows a like dignity of line in a Renaissance brocade.

Contrast with the formal columns and large mass of the Georgian house the demureness of the New England cottage, sitting snugly on the



TYPES OF TEXTILE DESIGN (See page 726)

ground, painted white with green shutters, and disclosing low ceilings and tie-back curtains of dimity or dotted swiss. In people, demure grace is most pronounced in small, dainty women with blonde curling hair, quick movements, and light voices. The India print of figure 4 possesses the grace of small figures set demurely. The line is broken, not continuous and ascending as in the dignified Italian brocade.

Very different from the dignity of the high-ceilinged drawing room of the past and from the primness of a cottage parlor, is the dashing impressiveness achieved by many of our modern apartments. Their lines and colors are striking, though not bold. Take as an instance a room with dull silver walls, black lacquer wood work, warm gray carpet, chromium furniture upholstered in two tones of tomato red, perhaps in the pattern of figure 7. In people the striking note is found in the animated and impressive woman who looks her best in clothes of unusual cut and color. She could wear unusual textiles like figure 1, that have dashing but intricate designs and colors that surprise.

Quite different from the striking house is the natural house that seems not to have been built, but rather to have grown. We find it in the rambling farm house, Frank Lloyd Wright's low-lying prairie houses, and the simple old adobes of the West. Here the surroundings, the material used in construction, or the needs of a growing family have dictated the form. The woman who likes sports clothes or tailor-mades and can wear them well reflects the same frankness. In build she is square shouldered and well set; and in face and manner she is direct. In textiles, the Navajo blanket, figure 5, shows simplicity of line and a rough naturalness of texture. The impression it gives is one of directness.

In many fabrics other than those mentioned we can find dignity, grace, flair, or directness. Some of the most successful textiles combine these qualities. Generally speaking, dignity and formality are expressed in the color, sweeping curves, and rich textures of Persian rugs, of Oriental and Renaissance brocades, velvets, and brocatelles, and their modern counterparts. Pomp and circumstance are found in the weight of heavy moirés and velours, in the intricacy of point lace. The demure is met in crisp taffetas delicately flowered, in organdy, in point d'esprit, in Alençon and Valenciennes laces, in calicoes and chintzes of small patterns, and in hooked rugs of floral patterns. At present, the most strikingly patterned textiles are dashing flowered prints, large plaids, and stripes for sport or upholstery, and modern rugs with interesting color contrast. Frankness and naturalness in fabrics are represented by tweeds, by the rough-textured weaves of Rodier, by snugly geometric patterns, by

reticella work and early point and bobbin lace, by peasant costume, by Navajo blankets and the rugs of Asia Minor.

Students who are allowed contact with a variety of expressions in textiles, look for the causes of certain characteristics. They are interested in finding that individuality comes through the characteristic line, through the plan of the pattern, the scale, the combination of color, the weight, the texture, and the combined effect of all these. We have already noted the directness of straight unbroken lines in the Navajo blanket, the dignity of continuous ascending curves in the brocade, the demure grace of the broken curves in the India print, and the dash of diagonals both straight and curved in figures 1 and 7.

Students will also find that the plan on which the pattern is built is largely responsible for the expression of the whole textile, and hence for the place in which it should be used. The unassuming effect of small checks is familiar and is corroborated by the charming silk designed by Vally Wieselthier (figure 6). We know that demureness comes from a pattern of small scale and set patterning, and find as examples checkerboard plans, diamond plans as in figure 4, or unobtrusive striping as in typical Louis XVI silks. An ogival plan, figure 2, in which curves bend toward one another progressively, is more intricate and is apt to bring dignity. An easy patterning like that of figure 1 or 7 is striking, gay, or even breezy. A good collection, in other words, contains examples of many types of pattern plans.

When we choose fabrics we seek not merely the colors we need in the room or dress, but among these we find the one that speaks in the same terms as our room or person. Color combination is partly responsible for the character of each textile. Splendor of color, scarlet against gold, enforces the dignity of the Renaissance brocade illustrated, while the demureness of the India print is mirrored in colors of middle value and intensity, rose and green-blue with thin lines of rusty black upon a background of natural color. Sophistication comes to the Lesher mohair designed by Ilonka Karasz, figure 7, through its color as well as its involved pattern of diagonals. It is printed in pure black, cool and warm grays, and a strange yellow. How unsuitable the combination would be for the Indian blanket which is delightful in its direct red and blue! The riotous flowers and hearts with which a peasant embroiders her cap or apron are perfectly carried out, as in figure 3, in blue against red with sympathetic pink and yellow in the offing. Much of their gayety and exuberance comes from a daring use of pure color.

While we need textiles whose expressiveness is unified throughout, in

line, pattern, color, texture, and scale, we also use the more piquant ones that combine varying expressions. As an example, picture figure 1 in ash pink and blue with little value contrast, or figure 7 in a frank color combination like red, blue, and white.

We return to our second essential of a workable collection, variety in kinds of good design. The artistry of the weaver or designer can be shown in so many ways that it may be well to consider them one by one. The way the fabric is produced or ornamented may be so pleasantly apparent that we get from it a feeling of honesty. The pattern and weave may be so well suited to one another that again we are impressed by a fundamental integrity. Whenever a controlling idea is apparent and beautifully worked out we sense unity. If the weaver or designer has put himself joyfully into his work a certain freshness results that brings excellence to the fabric. We can thus discover three qualities inherent in good textiles: honesty, unity, and joy or freshness.

Honesty is most apparent in hand-woven materials and in patterns that are pliable like the textiles they ornament. Also, we enjoy the intrinsic honesty that comes when a designer lets his way of working influence his design. As examples of the latter we can turn to early and modern printed fabrics and to tapestries woven before the sixteenth century. Two of the textiles, "Dinette" and "Aiken Drag," recently designed by Ruth Reeves for W. & J. Sloane, gain a great part of their charm from the fact that we can find evidence of the cutting on the original block from which they are printed. Many of the best tapestries never attempted to conceal the fact that they were woven with simple darning stitches, and a part of the beauty of such superb pieces as the "Lady and the Unicorn" in the Cluny Museum comes from the chastening and strengthening of the design by a simple coarse medium. Whenever we feel that the particular pattern should be on just that material, done in just that way and in those particular colors, honesty is present.

Honesty is not enough, however, to bring excellence to a textile. The design must be more than suitable; it must have unity within itself; it must hold us as an arrangement of repeating and differing masses. In the most interesting designs the masses and lines interlock. An elementary form of interplay is seen in the Navajo blanket where the dark zigzags bite into the light field, just as the light zigzags push back into the dark. We say that this type of design, met so often in the latch-hook borders of Oriental rugs, is reciprocal. Interweaving patterns are made by considering the background just as carefully as the figures

placed upon it. Sometimes a superb design like the artichoke pattern in figure 2 has been achieved only after centuries of refining. This particular pattern originated in the East and was taken by Oriental weavers to Sicily, thence to Lucca, and finally along with its captured weavers to Florence. From repeated use with slight refining variations, the pattern reached its present beauty in the fifteenth century. Every leaflet curls in such a manner that it is not only handsome in itself, but in addition impresses a beautiful line upon the background spaces. The lights in the pattern are just as pleasing as the darks, for the weaver was an artist. The designers of toiles, on the other hand, have ignored the possibility of making the background part of the design and consequently have produced fabrics that are banal or merely interesting and quaint. In the best modern textiles (figures 1 and 7) it is often impossible to tell which was meant to be the background, since no tiniest spot is unconsidered and a continual interlocking brings complete beauty.

Another reason lies back of the success of the best contemporary textiles; they were designed by artists who enjoyed the doing. The poor fabric is the work of a stupid, or, more often, a jaded designer. Excellent textiles always bear the marks of the designer's or weaver's pleasure in creating, and sometimes the chief charm of a textile lies, as in the silk of figure 6, in its playfulness. This fact is taken advantage of in Germany today by practicing hand-loom weaving on a factory basis and thus making it possible for the weaver to vary the design as it develops. Sitting at her loom weaving a striped material into which she can introduce a contrasting line of rayon at will, the weaver watches the effect of her design and when she feels that it is growing dull, throws the rayon shuttle across several times and then returns to her darker striping. No machine product can rival a peculiar aliveness possessed by textiles woven with such affection. Undoubtedly, the peasant could never achieve such delightful color combinations and charm of naïveté if she did not have a zest for embroidery and for decking herself out.

In the sixteenth and seventeenth century weaving of the Orient, joy and absorption in creativeness formed the core of beauty. The rug of the Oriental weaver was his life and the embodiment of his philosophy. Among nomadic tribes every act of living contributed to the rug that was slowly unfurling its beauty on the loom. Sheep were tended that they might contribute wool; the shepherd spun as he tended his flocks; and there were dyers proud of their inherited secrets. As the weaver tied in knots of blue he thought not merely of the design and of the sky that was pure above his flocks on the hillside; he dreamed of eternity

and knew that to the user of the rug, if he was an Oriental, the patch of blue would speak in terms of philosophy as well as beauty. Is it small wonder that the fine old rugs of the Orient are masterpieces, since a part of life went into each?

Looking once more to our collection, we find that we need textiles of varying, well-defined expressions and that these in turn will be so good in design that they will be inspirational. Fortunately, the qualities we seek for a usable collection go hand in hand. Expressiveness is found in textiles of beauty; if a gifted designer has zest for his work, he impresses the pattern with spirit, gives it fineness of proportion and interweaving rhythm, and utilizes the resources of the textile art in such a way that his material possesses honesty. No matter what the price, textiles that have been created thus with both beauty and esprit are truly usable, for in each situation, whether connected with dress or home, we need a textile that charms with its beauty and harmonizes in expression with its surroundings.

With even a small but well-chosen and growing collection, every branch of home economics can be enriched. There will be damask weaves which will offer substitutes for the banal designs now current in some table linens; there will be color schemes in other textiles which can inspire interesting table sets or even the color arrangements of canapés or salads; there will be materials that can be experimented with in combination for upholstery, draperies, cushions, and couch covers; there will be dress materials for various types and seasons. Most valuable of all, there will be fine examples that can be used as inspiration for whole rooms or unusual garments. An old hooked rug can form such a nucleus, and the class will gain much in selecting other furnishings to harmonize in spirit and color. Similarly, a peasant blouse can be made into a short jacket for a suit of distinction.

Such a collection will prove effective as a silent but potent element in instruction. With each problem in clothing or related art, cases can display fabrics whose line, color, texture, and other qualities are appropriate to the subject. The cumulative effect of such succeeding small exhibits is measurable in terms of widening appreciations and deepening understanding of all design. To students surrounded daily by significant and beautiful fabrics, gaining inspiration from them for their own designing and color work, handling a variety of good textiles, arranging and combining them for dress and home, to such fortunate students, who can say what worth-while attitudes and greater sensitiveness will come?

HOME ECONOMICS FOR THE HANDICAPPED

The needs of the handicapped are receiving increasing attention in all fields of education. The following papers show that home economists are studying their part of the question and that home economics material and procedures are being successfully adapted for such use in various types of schools.

A STUDY OF HOME ECONOMICS IN THE TRAINING OF HANDICAPPED CHILDREN[1]

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All home economists know that if home economics is interpreted as a study of "right living," it should play a part in the education of handicapped as well as normal children. However, experience has shown that it is very necessary to adapt courses to meet the needs of this group, since physically handicapped children are unable to do some types of laboratory work and mentally handicapped children cannot grasp the subject matter usually included in the courses.

A committee appointed by the department of elementary and secondary schools in the American Home Economics Association has conducted a study for the purpose of finding out present practices and obtaining opinions in regard to home economics in the training of children who are physically and mentally handicapped. Although the suggestion for this study was made before the meeting of the White House Conference, the emphasis placed on the training of handicapped children in the Children's Charter made the work seem more necessary.

Eighty-three school systems and forty-six colleges and universities, representing all sections of the country, replied to questionnaires sent by the committee. Seventy-five of the eighty-three school systems reported handicapped children in the schools. In the mentally handicapped groups were included mentally defective and over-aged children and in the physically handicapped groups, children who are crippled,

[1] Report presented to the department of elementary and secondary schools, American Home Economics Association, at Detroit, Michigan, June 26, 1931, by a committee consisting of Grace P. McAdam, Mildred Sipp, and Clara Lee Cone, chairman, in cooperation with Jessie Winchell, general chairman of the program of work committee.

blind, and deaf, as well as some anemic, tubercular, cardiac, and chronic invalid cases. In the elementary schools the mentally defective and over-aged groups were the ones reported most frequently; in the junior high schools, the over-aged, the crippled, and the mentally defective; and in the senior high schools, crippled children, those who have difficulty in hearing, and the over-aged.

School systems differ in their methods of caring for handicapped children. Sometimes the same city reported the placing of handicapped children in separate schools, in separate classrooms of regular schools, and in the same classes with normal children. The plan varied with the type of handicap and in some cases with the sections of the city. Although many cities reported the plan of separate classes for elementary school groups, a large number of separate schools was also reported. There were comparatively few separate schools for the junior and senior high school groups, but numbers of separate classes were reported, particularly in the junior high school. Many senior high school pupils who are handicapped physically are placed in classes with normal children.

Ninety-two per cent of the schools having handicapped groups reported that some form of home economics was taught to these children. Fifty-three per cent of the teaching of home economics is done by home economics teachers; thirty-five per cent by regular teachers of handicapped children; and twelve per cent by teachers of special subjects.

As reported in the questionnaires, the three leading objectives for the teaching of home economics to handicapped children were: (1) to help them to become independent in caring for daily needs, (2) to promote formation of better health habits, and (3) to develop wholesome relationships toward family members. Two objectives which were reported less frequently were to give some knowledge of correct practices in child care and training and to prepare for some vocation related to the field of home economics. There seemed to be no outstanding differences in the objectives for the physically and mentally handicapped. There were not so many answers to this question for the physically handicapped, probably because physically handicapped children are taught more often in classes with normal children.

It is interesting to note that in answer to the question on the types of home economics that can be taught most successfully to handicapped children, laboratory work in foods and clothing was reported by far the most successful type for those with physical as well as for those with mental handicaps. Problems in relation to home and family life and to child care and training can be taught, but less successfully than labora-

tory work in foods and clothing. Other problems in food study and in clothing and textiles can be taught much more successfully to physically handicapped than to mentally handicapped groups.

Although the study shows that the teaching of home economics for vocational purposes is not the primary objective for handicapped groups, some of those answering the questionnaire reported a number of minor vocations for which home economics courses might train. For the physically handicapped, dressmaking and rug-making were listed oftenest, and for the mentally handicapped rug-making, simple sewing, and minor types of cafeteria work. Although a number listed the care of children, several made a note of the fact that mentally handicapped pupils were not recommended for work of this kind. Among handicrafts listed as especially suitable for handicapped children and taught under home economics direction were weaving, leather designing, laundering, and fancy work.

The last question asked supervisors of home economics was: "Do you think that teacher-training institutions should offer to home economics students courses which should give a more sympathetic understanding of the needs of handicapped children?" It is interesting to note that forty-three of the fifty-two supervisors answering the question replied in the affirmative. Five answered in the affirmative with reservations, and four answered in the negative. Since eighty-three per cent felt that courses giving some appreciation of the handicapped child should be offered in teacher-training institutions, it is evident that the home economics teachers in our city public schools meet to some extent the problem of the handicapped child.

The last group of questions was addressed to directors of teacher training in home economics in colleges and universities. Since these teachers did not agree in their interpretation of the questions and since personal reactions were given in many cases, it is difficult to summarize the answers. There seemed to be the following trends of opinion:

1. Special courses planned particularly to give an appreciation of handicapped children should not be required for prospective teachers of home economics. Some expressed the opinion that other subject matter was more necessary, some thought that most teachers would have little need for this type of subject matter, and a great many objected to these courses because of the lack of time in an already overcrowded schedule.

2. If there is sufficient time, it might be desirable for the prospective home economics teacher as well as teachers of other subjects to elect a course giving greater appreciation of the needs of exceptionally able as well as handicapped children.

3. Home economics students preparing to teach handicapped children should take these special courses by all means since this is a specialist's job.

4. Some appreciation of the needs of the handicapped child can and should be given in courses already required. Some expressed the opinion that special emphasis on individual differences in pupils should be given in general and special methods courses. Others thought that the needs of handicapped children could be emphasized in courses in child development, child psychology, child nutrition, and sociology.

This study does not include a program for solving the problem of the contribution of home economics to the handicapped child, but it will be considered worth while by the members of the committee if supervisors, teachers, and directors of teacher training in the field of home economics will think more seriously of their responsibility for the handicapped child. Although the problem of teaching home economics to the normal child seems of paramount importance, home economists share with teachers of other subjects some responsibility for the handicapped group.

VOCATIONAL HOME ECONOMICS FOR SLOW-PROGRESS STUDENTS

HELEN VALK

The Junior Vocational School, Grand Rapids, Michigan

The Junior Vocational School of Grand Rapids, Michigan, belongs to the type which might well be called "opportunity schools." They are not to be confused with senior technical institutions, which have various requirements for entrance. All one must do to qualify is to be at least thirteen years old and in need of what we have to offer.

The clientele is composed of misfits from the entire school system. Some of these slow-progress students have changed systems frequently or have entered from the country; others must begin to earn their own living at an early age; many have limited capacities and are deficient in earlier training. Their I.Q.'s run from 54 to over 100. A fact that should not be overlooked is that a large percentage come from broken homes, the disastrous results of which are often before us. Large school systems usually have enough of these people to treat thus in a separate school. Formerly, they were placed in special help classes or left to drift, and if they dropped out eventually, it was considered a good riddance.

The Junior Vocational School has demonstrated in the four years of its existence that for many of these students much can be done and that

for practically all something can be done to make them better citizens, to improve their health and outlook on life, to raise their standards of work and of play in leisure, to make them cooperate and teach them tolerance, to show them the possibility of a future free from the degraded conditions in which they have lived, to make them recognize the value of right and the curse of wrong, to remove their prejudices and broaden their vision, to give them a background for beginning a vocation, and finally to establish in them a cheerful self-respect. The acquisition of these and similar traits should be the direct aim of the work. It is arrived at by means of the various class activities, which in this case consist half of academic and half of vocational work, augmented by physical, musical, and artistic endeavor. There are no study periods. All work is supervised.

The boys' vocational work consists of general shop and metal work, woodwork, printing, tire repair, shoemaking, and handicraft.

The girls have handicraft classes in which they learn to do reed and rush work, light woodwork, and various types of rug-making, bag weaving, and chair caning.

In the clothing classes they make garments of every description for themselves and others, learn the care of clothing, the suitability of clothing, and the correct use of color.

There are home management courses and classes in family relations, necessary for all girls but especially for those of this type who frequently marry young and raise large families. For this reason, also, there is a class in home nursing, child care, and health taught by Mrs. Ethelyn Vernier, a trained nurse. A very practical application is here made, and time is allowed for pupils to put into practice their knowledge after the class discussion and demonstrations are finished.

The cafeteria of the school is run entirely by the girls. They prepare the food in classes and serve it at noon. The menu is varied. They check trays, make change, keep books and bank, and before leaving, put the cafeteria and kitchen in order. All laundry work is done at the school. The cafeteria is self-supporting and has a substantial balance, besides feeding each noon (gratis at one time) as many as forty children who were undernourished and unable to bring or buy a lunch. Dinners, luncheons, and teas have been given to furnish experience in table service. Occasionally, there is special order cooking. The work rotates so that each girl has a chance at each kind of task.

The experiment has proved worth the effort. As in any new project, new aspects of the various situations continually present themselves for

consideration. We believe that more and more work will be done for handicapped children, at least until we are better able to cope with the source of the difficulties into which these children are born.

HOMEMAKING ACTIVITIES FOR "DIFFERENT" CHILDREN

STELLA V. COFFMAN

Director, The Southard School, Topeka, Kansas

The Southard School at Topeka, Kansas, a private school established by Dr. Karl A. Menninger, gives individual instruction to children of any age who, because of handicaps, have difficulty in adjusting themselves to the usual school methods.

In schools for normal children the teachers are too busy to devote proper attention to individual children. Thus, the "different" child is more or less excluded from group activities, develops behavior disturbances and inferiority feelings, and becomes more severely handicapped. The special school with medical supervision gives individual attention and removes the friction set up by association with normal children in home and social groups. Moreover, in such a school special effort can be made toward the discovery of the handicap and restitution to normalcy, and medical treatment can be given to children handicapped by organic neurological diseases without interrupting their schooling.

The children, limited to fifteen in number, are usually between five and fifteen years of age and come from good homes and exceptional parents, many of them of the professional class. Their brothers and sisters are often of the accelerated type that takes honors in college.

The children, teachers, and nurse live together in the comfortable, modern school home, which has ample outdoor play ground and equipment for supervised play.

Quite different from the regime of ordinary home life or other schools is the continued effort to follow a routine procedure, whether it be ultra violet light treatment, endocrine treatment, weighing, or letters home. A special excursion is planned for each Thursday afternoon and the children are taken to specially recommended picture shows. Recently they enjoyed Jean Gross' marionettes in "Tom Sawyer and Huckleberry Finn."

The doctor calls each morning for conference with the nurse and teachers, advises the dietitian, visits the children, gives endocrine treat-

ment to some, and prescribes for their ills as needed. He reviews the behavior characteristics of each child, noted the day before by the teachers or nurse, as a means of learning the cause and nature of the disturbance and where and how to "mend."

The children, under the direction of the teacher, keep a daily record of the following health habits: I slept ten hours last night with windows open; I brushed my teeth last night and this morning; I have a clean handkerchief today; I had cereal, fruit, milk, or cocoa for breakfast; I drank a pint of milk yesterday; I washed my hands before each meal yesterday; I had a bowel movement yesterday; I looked both ways when crossing the road; I shall try to sit, stand, and walk correctly today; and I had two baths last week. A perfect record for the week earns a gold star on the chart. The children are interested also in keeping individual "weather charts" as well as one directed by the teacher for the group.

In the dining room teachers and the nurse eat with the children, and effort is made to keep a cheerful, wholesome atmosphere for meal time as well as at all other times. The table conversation is limited to interests of the children, who are encouraged to have a part in it. The meals are prepared to meet special individual needs; the child who is twenty-five pounds overweight requires a different diet from the child who is fifteen pounds underweight. Single beds are provided for each child, but often roommates are desirable. Each learns to make his own bed and keep his room in order, help set table, clear the table, and dry the dishes. Some of the girls interested in cooking prepare various dishes under the supervision of the teachers.

Besides the long living room where a music period is held, there are two large rooms for school work. One is called the playroom and is especially arranged for rhythmic work and physical exercises; the other, called the schoolroom, is furnished with school tables and chairs, and here most of the school work is done. Because much individual instruction is required, one teacher handles a group interested in one project in one room while another is giving individual attention to a child in the adjoining room.

While the children may have similar afflictions, each one presents an entirely different problem. Some are without number concept or muscular coordination; others have speech difficulty or are retarded mentally in different subjects. Before they come to the school they have been told so often that they are "dumb" that they believe it and repeat, "Oh, I'm dumb, I can't." They are stimulated and encouraged to make

an effort and progress slowly but surely. Dr. Menninger tells them that "I can't" is like a big stone wall, and the way over is to add "ry," and change it to "I can try."

The children take great delight and interest in handwork, and whatever may be an aid in muscular coordination is encouraged. Coloring develops the color sense and a feeling of color harmony and gives the child a real pleasure in having created something.

A description of one special project may illustrate the practical working of the school's method. A project on cotton was developed much as with an ordinary group; the steps were taken more slowly, and more preparation, emphasis, and suggestions on the part of the teacher were necessary; but enthusiasm, interest, and pride in achievement were observed throughout the entire project. The special interest and ability of the group naturally determined the scope of the project.

The approach was made through discussion of materials for clothing and why cotton was used. The children found pictures of cotton growing, picking, ginning, baling, and manufacture of cotton threads, read about the cotton industry in their geographical reader, and finally had a chance to see real cotton plants.

The first problem was to know the kinds of material used for clothing; the second, to recognize the appearance and feel of such cotton materials as gingham, muslin, calico, print; the third, to learn the care of cotton cloth and the effect of soap, hot water, and sun on it; and the fourth and last, to learn how cotton cloth is made. Various correlations were made with other work, such as language study, arithmetic, geography (both of the United States and foreign countries), industrial arts, fine arts, and science. For example, in industrial arts, the class planted cotton seed and cared for it, made booklets on the subject, and wove small rugs. In fine arts, color harmonies were studied, and a design was made for the booklets. In science, the children saw the effects of soap on printed cloth, of sun on unbleached cloth, and observed shrinkage.

This cotton project was of especial interest to an older girl with a personality problem as well as a physical affliction. She very much disliked being grouped with the other children, feeling that her age and mentality placed her in a class above, while they had an aversion for her egotism and were happier in their separate ways. As her specialty was cooking and sewing, the "cotton project" easily supplemented her sewing and led to further individual textile and clothing study in which she was happy.

COOKING AND SEWING FOR BLIND STUDENTS

ISABEL BETZ

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The opinion has often been expressed that day school classes for the blind could not offer as adequate training in household arts as is provided in special institutions. This need not be the case if a special course is conducted to meet the needs of blind students.

There have been day school classes for blind children in the public schools of Cleveland since 1909. During these years the program has varied slightly; but in substance it has remained the same. Besides following the required course of study in our schools and participating in the regular class recitations in competition with their sighted classmates, blind pupils have had music, gymnasium work, handwork, manual training for boys, household arts including cooking and sewing for girls, in special class groups under experienced teachers.

This paper describes the work of a household arts class composed of girls in the sixth to ninth grades inclusive. While none of these pupils is able to see enough to be educated by means of print books, there are more and more of those enrolled in braille classes who have useful vision. Even a slight degree of vision makes it less difficult for a girl to learn to handle utensils and to become efficient in the duties connected with homemaking than for a girl with absolutely no sight. Nevertheless, the same work is required of the girl who does not see at all and progress is at a rate commensurate with her ability.

Since there is no time during the week when all the girls are free to meet for the required time, the braille class in foods and household management meets for three hours on Saturday morning. The course is planned to give the girl a general and practical working knowledge of family life and its requirements; to create greater interest in household problems, including sanitation, health, and personal care; and to give knowledge of how to select, prepare, and serve foods.

It is necessary that the class be small, for it is not possible to use group instruction as with sighted girls. That in the class there are a number of grade divisions, means that some have had some training and experience while others have had none.

The course of study for regular junior high school classes is followed as far as possible. The progress of the braille pupil is necessarily slower because of inability to visualize processes or to learn from observation.

Each step must be demonstrated by the teacher to the individual child, learning must come by doing, and repetition of even the simplest processes is essential. Regular class work, home training, and experience play important parts in a class of this kind. Discussions help to develop interest on the part of the pupil who is encouraged to suggest problems and ways and means of performing each step in their solution.

The selection, preparation, and serving of foods is especially important in the development of the normal blind girl in order that she may compete with the sighted members of her family and do her share of work in the home. The measuring of ingredients is one of the first things to be learned and takes repeated practice before accuracy is obtained. Accuracy rather than speed is stressed for the pupil who does not see, but there should be no dawdling. The recipes used must be clear, concise, and simple in order to avoid confusion and failure in the results.

Most blind girls have an aversion to lighting the top and oven burners of the gas stove but are not afraid to use them. This fear of putting the match to the gas may be overcome if the child becomes accustomed to the lighted stove before she is asked to start the flame. Confidence is also gained when a girl who has had some experience lights the burner for the beginner. The latter then practices with the help of the teacher in order to avert any chance of being frightened by a burn.

Each girl prepares and serves the dish planned for the day's lesson. Table service and etiquette are discussed at each serving. A complete meal is occasionally prepared. Together the girls plan the menu and discuss the procedure for its preparation; then each girl assumes certain duties for which she is to be responsible. Home projects are also necessary if the girls are to become efficient in an environment other than the school kitchen.

After three years of training, the girls should have sufficient skill and interest to contribute to the care of the home or even to take the major responsibility if necessary. There have been instances where the mother was the wage earner outside the home and where all of the household duties fell upon the blind daughter who did her work in a way that would do credit to any sighted girl.

For sewing and handwork, the braille class meets for forty-five minutes four times each week. This group is also small as there are a number of grades represented and much time would be lost if girls had to wait too long for help from the teacher. This course is planned to enable a girl without sight to learn how to select clothing, how to care for clothing, and to know materials; also, to acquire skill in repairing her own clothes

and in making simple garments. The blind girls learn the stitches in the elementary grades and have some experience in sewing before being assigned to the special junior high school class where the work becomes more difficult. "Calyx-eyed" or self-threading needles are used for hand sewing and small wire needle threaders are used to thread the sewing machine needles. It is necessary to pin and baste all seams, and considerable time and patience is required in order that each girl may work up to the limit of her ability and accomplish the desired amount of work as independently as possible.

The outline for regular clothing classes is followed, but it is impossible for all to develop the same speed and skill; therefore, it is not advisable to require the same achievements from all in the group. Some need more repetition than others. Repetition may be obtained by making several garments for which the same construction methods are used.

A cooking apron and cap are usually made first. The straight seams in these give good practice in the use of the sewing machine and the arm gauge. The latter is set so that the edge of the material touches it as the seam is stitched at the required place. The cutting and most of the fitting must be done by the teacher.

Each problem may be used for class discussion, during which the suitability of the garment as to type, material, construction methods, and usefulness may be decided upon. Sometimes garments are brought from home to be remodeled and repaired. Knitting, crocheting rugs with roving, and basket weaving are also continued from the grade work, but are stressed as home rather than school projects.

The degree of skill in sewing which the girls will reach during junior high school depends upon home cooperation, school training, and individual aptitude. Girls from these classes are prepared to do sewing and specialty shop work under supervision for a livelihood, and some have been so employed.

HOME ECONOMICS FOR THE DEAF

HAZEL THOMPSON CRAIG

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Less than a century and a half ago it was considered almost an impossibility to educate a "deaf and dumb" child, and it was not until 1817 that the first school for the deaf was founded in America. At present there are 18,767 deaf children receiving education in special schools in this country. The residential schools in which the pupils

spend about nine and a half months of the year take care of the largest number, or 13,907 children. The day schools—public, private, and denominational—take care of the remainder. The aim is to have a grading system that parallels that in the city public schools and similar courses of study, including those in home economics.

Several things make the problem of educating deaf children different from that of normal. The great majority of the deaf children live in school dormitories or cottages and are thus separated from their parents for the greatest part of the year. Means of communication are decidedly different. It is much harder for them to gain command and use of language than for hearing children. The deaf child's world is small and limited. His vocational opportunities are also limited. In general, deaf children are retarded from two to five years behind those with hearing.

One practically never finds a child who is stone deaf, and it is almost always possible to teach speech to some degree. This is one of the most interesting, as well as the most tedious and difficult, phases of educating the deaf. A child gets vibrations through feeling the teacher's nose and throat, watches the formation of the lips, and immediately tries to reproduce the same tones. It requires three to four years for him to gain enough control of the muscles governing the organs of speech to be able to make the elementary sounds of speech. The child who has lost his hearing after he has learned to talk and the hard-of-hearing child have an advantage over the congenitally deaf child because they have learned some words upon which to build others. Many children come to school at the age of four or five with not a single word in their vocabulary. The first year some 175 words are learned, from the names of simple classroom and everyday objects to verbs such as sit, stand, run, dance.

In the lower grades speech and speech reading are used entirely because it is felt that better language can be obtained this way. The ideal situation would be to continue this method throughout all grades, but many children are so slow in learning that classroom time needed for arithmetic, history, geography, and the rest, is lost in the slow teaching of speech. Teaching words by spelling them out with different formations of the fingers of one hand is much quicker, and some schools use the combined method in which the words are spoken and at the same time spelled out on the fingers of one hand. Writing is used to a greater extent than in the ordinary public school. The sign language, a language of mental pictures formed by the hands, is a very unfinished sort of language; but by means of it communication is as rapid as by word of mouth, and out-

side of the classroom pupils will resort to it almost entirely except in schools where it is absolutely forbidden.

The words pertaining to the home that any ordinary six-year-old would know are not necessarily a part of the deaf girls' language. Thus, the first task of the home economics teacher is to begin teaching "shop language"—words related to the home. The sewing teacher will probably have a table with various tools used in sewing on it. She will give a command such as: "Bring me a thimble," repeating the command if necessary. The child picks up the thimble and very carefully pronounces the word. The foods teacher teaches the words used in cooking in the same manner. Some home economics teachers prefer to let the pupils use the various tools for almost a year before teaching their names. When that is the case all of the laboratory work is by imitation, making articles like the finished samples.

When the teacher wants to secure the attention of the class she stamps heavily on the floor and waves her hand several times. Luckily, classes in schools for the deaf are small, ranging from eight to eleven, though some home economics classes will have twelve to fifteen pupils. In the upper grades the teacher will probably combine a short lecture with the recitation; but she must pause while the pupils take notes because a deaf child must use her eyes for "hearing" as well as seeing.

Long before the cottage and practice house idea was begun in the usual public school and college, a few wise teachers in schools for the deaf felt the absence of home training among deaf children and several opened cottages where the older girls lived and kept house. However, this practice was not widely followed up; and now schools for the deaf are, on the whole, below the others in this respect.

It is the aim in most schools to teach cooking, sewing, and homemaking so that deaf girls may become capable mothers and homemakers. In some of the large schools the home economics objective is also vocational. Much home economics must be taught in schools for the deaf to make up for the training usually received at home. If well taught, the child may receive as good, if not better, training than at home. However, it is difficult to get away from institution molding and develop individuality, originality, and self-reliance. The deaf child does not have the everyday experience that hearing children of the same age have, such as going to the store, helping mother, talking with her parents, and many others that develop self-reliance. She can learn much from her contact with her teachers and especially home economics teachers because their classes are informal and because small children are eager to do things with their

hands and perhaps because deaf children feel more proud of visible results than do hearing children. The personal contacts with pupils in schools for the deaf are a very important feature in the work.

The type of home economics work taught in the residential schools for the deaf is very similar to that in public schools, but practically no home economics is taught in public day schools for the deaf. The little children in the fourth and fifth grades always love the bed and doll projects. The children are kept interested just by doing things in the lower grades, and theory is not introduced until language is well established. By the time a deaf girl completes a course of study in a residential school, she can usually sew and cook reasonably well and has learned something of the handling of money. This is an important part of the training also, because children in such schools have little occasion to spend money; everything is provided for them, and money has no real value to a deaf child until he begins to earn his own. A few of the older girls in the school help wait on tables either in the school or in nearby private houses to earn a little spending money. They are much more careful with their earnings than those pupils who are always given money.

There are ten or twelve outstanding residential schools in the country that are doing excellent work in home economics under the direction of college trained teachers, many of whom have advanced degrees. Some turn out fancy pastry cooks, well-trained waitresses, dressmakers, alteration hands, power machine and hemstitching machine operators. Many of the smaller schools, because of lack of financial support, are falling behind. The most common criticisms of their home economics work are that no definite time allotment is given home economics classes; that no definite or consistent course of study is followed; that in many cases housekeepers with no vocational training come in a few hours a day to teach what they can; that home economics classes must do the school mending and darning and help with cleaning and the preparation of vegetables, routine work in which no problems are learned; and that home economics classes are considered the best place for retarded pupils who cannot learn in academic classes. However, these difficulties are dying out, and it is hoped that within a few years enough well-trained home economics teachers can enter schools for the deaf to raise home economics work in every school to a higher level.

People always ask what deaf boys and girls do after leaving school. About half of the girls marry after leaving the state schools or the twelfth grade, when they are from nineteen to twenty-two years old; they usually but not always marry deaf people. A large number go into vocations

bearing on home economics, becoming dressmakers, alteration hands, milliners, laundresses, power-machine operators, lunch-room helpers, and sometimes clerks, girl supervisors, and linen room supervisors in schools for the deaf. The teaching field for deaf girls in schools for the deaf is rapidly closing, though some college graduates go out as home economics teachers.

A small percentage of graduates of schools for the deaf enter college, two or three graduates of the state schools perhaps entering a state university or hearing college each year and about fifty coming to Gallaudet College in Washington, the only special college for the deaf in the world. The five-year course there is perhaps equivalent to between two and three years of regular college work. Before entering the freshman class, students are required to remain one year on probation, though city high school graduates are usually admitted to the freshman class upon a special examination.

Home economics work is offered at Gallaudet College throughout the five years, and includes drawing in the preparatory year, handicraft and right living in the freshman year, clothing in the sophomore year, clothing and cookery in the junior year, and cookery and household decoration in the senior year.

Graduates of Gallaudet usually become teachers of the deaf, supervisors of girls, helpers in libraries and offices. The Hispanic Museum in New York employs at present about nine graduates of Gallaudet, one of whom has been sent to Europe twice to study textiles. The average earning capacity of the girls the first year of teaching is $600 to $900, with all living and laundry expenses. The average salary in other fields the first year is $80 to $100 per month, though a few graduates earn more.

Home economics in a school for the deaf has no doubt a vocational side, but its greatest aim should be for homemaking, especially preparing for more effective use of leisure time. Deaf friends in large cities are scattered, and there are few deaf people in small towns. In fact, a deaf person will not live in a small town if he or she can find employment in a city; it is too lonesome, especially since the movies have become talkies, and are no longer the attraction they have been. A girl need not be a wonderful cook or know how to make all her own clothes, but if, as a mother or an office girl tired from a hard day's work, she can occupy her leisure hours by making something pretty and useful that will give her contentment and joy, home economics work in schools for the deaf will have proved its worth.

SIGNS OF THE TIMES

HOME ECONOMICS AND THE WHITE HOUSE CONFERENCE. The field of home economics is a desirable source of help in disseminating the findings of the White House Conference. It has trained workers with valuable contacts. It has for its aim the high purpose of making a better family life in which the child is the center. It calls for a contribution of service from sociology, psychology, and science, all of which are needed to consider the whole child. Home economics in itself is inadequate to make the whole contribution to family and child life. The needs of the child as pointed out by the White House Conference reports afford the greatest opportunity yet offered for breaking down departmental lines and making contributions, one group to the other, in the attainment of the aim of the Conference.

Home economics groups made large contributions to committee work, the reports of which are being assembled, edited, and published for distribution. Many have been eager to help interpret and promote the findings of the Conference. Few have understood the embarrassment caused by the additional time needed in which to finish the reports for final release and the further amount of time needed for editing and printing.

The reports must form the basis of the plans for promotion, and when these are published there will be enough printed material available to afford a rich source for resident and extension teaching and research problems. Neither the committees nor the administrative office of the White House Conference can be of great assistance in adapting the findings and recommendations to the needs of individual organizations and institutions. It remains for professional groups to interpret, to "step down" and make available to the people that which they can use according to their peculiar needs.

The White House Conference office can edit, make digests, acquaint individuals with what is available, and make distribution wherever there is a demand. The home economist is a professional person trained to seek out all environmental situations and in her newer concept of home economics give to them a social significance in the interest of better family and community life.

Several institutions in which home economics is a part have introduced research and graduate study programs relating to the health and protection of children. It should be possible to use White House Conference findings to enrich both of these. The period of committee work for the Conference was all too short to permit of a large amount of research work brought to completion. Problems were discovered and stated which it is hoped institutions will carry to completion.

The extension service with adults and with 4-H Clubs affords a very unusual opportunity for promoting the findings of the Conference through the leadership of professionally trained men and women already engaged in the service. The findings of the Conference as they are edited and printed will be made available to national and state groups wishing to incorporate the material in their state and county programs. Work with rural homemakers in their home demonstration project groups easily relates itself to already established projects, such as, for example, child feeding and meal planning with the formation of food habits in the best interest of children. The hygiene of clothing and its social implications as well as the management of household work to release the time of parents for more care and development of children, all form a place in the extension program. In many states, child care and training are resolving themselves into definite projects. The White House Conference comes at this time with special aid and challenge to the new type of teaching.

In some states home demonstration agents and nutrition specialists with the cooperation of homemaking groups guide and promote phases of health education and school lunch work as a part of the community nutrition program. Foods, clothing, and room improvement groups among the 4-H Clubs will receive a large amount of assistance from the work already done by White House Conference committees.

National home economics agencies have contributed largely of their time and abilities to committee work and now are depended upon to pass on to their state groups the findings of the committees as they relate to their peculiar interests. These are the Bureau of Home Economics, the home economics service in the Office of Cooperative Extension in the United States Department of Agriculture, the home economics service of the United States Office of Education, the home economics division of the Federal Board for Vocational Education, and cooperative research in home economics in the experiment stations connected with the state agricultural colleges.

The American Home Economics Association with its various com-

mittees is well organized to promote throughout the United States the findings of the Conference as they are released. This assistance calls for the assembling of information and its classification under headings recognized in home economics teaching and the incorporation of this material into courses of study applicable to different educational levels and different types of teaching.

The organization of the follow-up conferences which is proceeding over the country will naturally include home economics workers as a directing force making the White House Conference findings an integral part of the life of the people in the states.

Home economics groups have uniformly asked for a source book as a guide in the preparation of material for addresses, teaching, radio, and other publicity. This request has been strengthened by other groups who recognize its value. The paramount difficulty is that all reports must be in before a source book can be completed. It thus leaves a very important source of help until a later date.

Home economics groups have found in the Children's Charter, which is a summary of all reports, a challenge to determine what responsibility home economics teaching has for the family and for children.—MARTHA VAN RENSSELAER, *Assistant Director, White House Conference on Child Health and Protection, Washington, D. C.*

TRAINING LEADERS FOR EXTENSION GROUPS IN CHILD GUIDANCE. In the promotion of better guidance of children in the home which is now an accepted aim of the Illinois extension program, leaders are needed for local groups of women interested in child care and training. To prepare for this leadership, a group of mothers in Kane County is studying under Edna E. Walls, the specialist in child care on the home economics staff of the University of Illinois. Since such work is still fairly new, a brief description may be of interest to workers in parental education or adult education, both within and without the extension service.

Better leadership for such local groups is probable when the background of experience and information of their leaders has been supplemented by at least a year of reading, discussion, and additional experience. With this idea in mind, and after council with interested mothers, the following tentative plan for the education of prospective leaders in child guidance and parental education was prepared by the specialist, assisted by a committee of home advisers.

I. Organization of group in county.
   A. Nomination by the home adviser and county president of from six to ten persons who may, in their judgment, become local leaders in child development and parental education.
   B. Approval of these nominations by the county Home Bureau officers.
   C. Notification by the county officers of persons thus chosen. Explanation to these persons by the home adviser of the details of this plan for preliminary education of prospective local leaders.
   D. Report by the home adviser to the advisory council, the state leader, and the specialist in child care and training, of the names and addresses of those who agree to take this preliminary preparatory work.
   E. Arrangements by the home adviser for all details connected with local meetings for this prospective local leader group.

II. Plan for study, observation, and discussion.
   A. A series of discussion meetings continued for at least one year, the number, time, and place of these meetings to be determined by the home adviser and state office.
   B. Definite readings and observations suggested by the specialist, home adviser, and members of the group as a basis for the discussion. (Arrangements were made for use of books from the Extension Division, State Library, Springfield.)
   C. A three-day period of more intensive training (preferably at the University) at the close of this year of study. (It is suggested that each county make a satisfactory adjustment concerning the sharing of the expense of the trip to the University.)

III. Active participation of these leaders in direction of group discussion.
   A. Organization of a group or groups in the county by the home adviser.
   B. Choice of a leader (from among those having preparation) by the organized group, with the assistance of the home adviser.
   C. Local leadership training meetings led by the specialist or home adviser at least one week preceding each group meeting.
   D. If a suitable book containing adequate subject matter is available, it is suggested that each member of the study group provide herself with a copy.
   E. An occasional visit by the specialist or home adviser to groups led by local leaders for the definite purpose of observing successful methods used by local leaders and encouraging them in their leadership. Individual members of a study group may be given opportunity (at a definite time) to ask questions or discuss problems with the home advisor or specialist.

IV. Follow-up.
   A. Round table discussion for group leaders at the University of Illinois at least once a year, preferably during Farm and Home Week.
   B. Invitation to all leaders (whether active or inactive) to attend the intensive training period to be held each year for prospective local leaders.
   D. Leaders to be kept in touch with recent materials and developments by means of up-to-date reading lists, circular letters, visits to nursery schools, kindergartens, clinics, and other places of interest.

On the basis of the plan, the project in Kane County has been carried out to the formation of the study group, and it is expected that it will be continued to completion. Objectives set for the project are:

I. Discovery of persons capable of such local leadership.
II. Preparation of these persons for leadership by:
  A. Discovering attitude held and knowledge already possessed on the subject.
  B. Educing new attitudes when advisable and presenting additional knowledge through reading, observation, and careful experimentation.
III. Making available to interested groups through these leaders, accepted information on the subject.

Achievements of group members indicate that progress has been made toward the first two of these objectives.

In eleven months, the eighteen women who make up the membership have read a total of 339 books, most of which were chosen from a list of 40 prepared by the specialist in consultation with scientists as to reliability of the subject matter and with mothers as to its applicability. The smallest number of books read by an individual is 10; the largest is 30.

As evidence of incorporation into practice of the principles of guidance secured through reading and of changed attitudes which have resulted, group members report modified methods of dealing with home situations and improved family relationships. At a recent meeting members of the group agreed that the reading they have done has changed their understanding of and attitude toward the problems of child guidance.

Formation of local groups in the county as outlined in the tentative plan at present is providing a foundation for work toward the last objective, "making available through these leaders to interested groups, accepted information on the subject."—CLEO FITZSIMMONS, *Home Economics Extension Service, University of Illinois, Urbana.*

COMPARISON OF CHILDREN IN THE HOME MANAGEMENT HOUSE AND IN A NORMAL HOME SITUATION. The plan of having students care for a baby in the home management house has been severely criticized on the ground that the development of the child cannot be comparable to that of a child in a normal home situation because he is deprived of a mother's affection, must make adjustment to many personalities, and will probably be spoiled by too much attention. Many home economists who have had actual experience in such cases maintain, on the other hand, that the home management house

baby develops normally, but they recognize that the validity of their opinion must be determined by scientific study.

In a preliminary investigation (1) in which the daily behavior of three infants living in the home management houses at Iowa State College was compared with available approximate norms for motor, social, emotional, and intellectual development, the results indicated the practicability of this method. Another study was undertaken, therefore, to determine not only how the rate of development of the four home management house babies at the College compared with these approximate norms, but also with children in normal home situations.

Two home babies of comparable age were selected for comparison with each home management house baby. One baby in each group was chosen from a home below and one from a home above average in socio-economic status, as rated by the Chapin Scale for Rating Socio-economic Status (2) and the Barr Occupational Rating Scale (3). The homes receiving the higher rating were designated as professional and the lower as non-professional.

The three children in each group varied less than two weeks in age. All were examined by a college physician to exclude any child who might be below average physically. A list was compiled of traits which might be expected to appear in children two months older and two months younger than those in the study, and copies of this were given to advisers and students in the home management house and to the mothers in the homes, all of whom cooperated by observing and recording the appearance of the traits in the children during a period of five months.

A call was made by the investigator at each home about every two weeks to observe the child and to discuss with the mother or the adviser any special points regarding the child's development. So far as possible, the records which were kept by the advisers and mothers were verified during these visits.

At both the beginning and close of the study, the child psychologist of the nursery school staff gave each child the Gesell (4) and Kuhlmann (5) tests; and at the close of the study the Merrill-Palmer (6) tests were given to the oldest group.

The responses of the children were summarized at two-week intervals. The data showed that all of the children were accelerated in development in several traits, that a few traits appeared at the age level suggested as the normal one, and that some traits appeared retarded.

The four home management house children as a group achieved 11 traits at the normal age, were accelerated in 114, and retarded in 22.

The professional home group achieved 6 traits at the normal age, were accelerated in 130, and retarded in 20. The non-professional home group developed 15 traits at the normal age, were accelerated in 103, and retarded in 32. Subtracting the retarded traits, the normal and accelerated traits gave a balance of 103 for the home management house group, 116 for the professional home group, and 86 for the non-professional home group—figures which have significance for comparative purposes only.

The differences in I.Q.'s between the first and last tests given by the child psychologist show a gain of 30 points for the home management house group, a gain of 64 points for the professional home group, and a loss of 8 points for the non-professional home group.

In order to determine in what type of traits the development of the home management house children differed from that of children in their own homes, the traits were grouped as motor, language, adaptive behavior, and personal-social behavior. The percentages of the total number of traits developed at or before the normal time by the home management house group were: motor 84.6, language 56.2, adaptive behavior 58.5, personal-social behavior 83.8. The percentages for the professional home group were: motor 80, language 75, adaptive behavior 66.6, personal-social behavior 95.7. The percentages for the non-professional group were: motor 75.3, language 59.3, adaptive behavior 66.6, personal-social behavior 72.9.

These percentages show a greater rate of motor development among the home management house children than among the others, while in language and in adaptive behavior they appear to develop more slowly than children from home environment. In net acceleration the home management house group was above the non-professional home group and below the professional home group. In differences in I.Q. the home management house group ranged between the other groups, as they did also in total number of traits developed.

In general, this limited investigation indicates that children from professional homes may be more advanced than home management house children and home management house children may be more advanced than children from non-professional homes.—RUBY SIMPSON and THOMAS F. VANCE, *Iowa State College, Ames.*

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NINTH-GRADE FOODS CLASSES ON THE LONG AND SHORT PERIODS.[1] In an attempt to discover what effect the shortening of the period for home economics had on the skills, knowledge, habits, appreciations, and attitudes of the pupils in food preparation classes, an experiment was carried on in 1930 in six ninth-grade classes in Minneapolis. The Board of Education, through its Bureau of Research, the home economics supervisor, and six teachers, cooperated in the study.

Three classes with the short (57 minute) period were compared with three classes on the long (86 minute) period. The pupils in the two groups were paired originally upon the following bases: their intelligence, the social and economic status of the homes in the districts in which the schools were located (as measured by the Simm's score card for socio-economic status), and the ability of the teachers, who were rated as about equally efficient by the supervisor. The experiment covered a period of eight weeks, during which all classes met daily, and in which they were taught, so far as possible, identical subject matter in cereals, vegetables, and batters and doughs.

As a matter of fact, the classes at the beginning of the experiment were found to be surprisingly similar in practically every respect in which they were compared, as may be seen in table 1, which includes means and sigmas for each measure used except the practical test. This last was found to be of no value, because of the subjective manner of marking which tended to rate all pupils low at the beginning and high at the end of the experiment.

A difference was considered significant when the measure of the two

[1] Based on a thesis prepared under the direction of Clara M. Brown and submitted in partial fulfillment of the requirements for the degree of master of science at the University of Minnesota.

groups being compared showed a difference that was three times the standard error of the differences between the means. In only one measure did the difference between the groups even approach this significance, namely in intelligence; but since the I.Q.'s were obtained from school records and were based upon different tests, too much importance cannot be attached to this difference.

TABLE 1

Comparison of the long and short period groups in terms of the means and sigmas for 5 measures

MEASURES	LONG PERIOD (44 CASES)		SHORT PERIOD (52 CASES)	
	Mean	S.D.	Mean	S.D.
Initial test	44.22	8.18	44.15	8.33
I.Q.	93.07	10.77	98.04	11.78
Age	14.68	1.06	15.01	1.00
Previous training	149.40	72.00	120.10	86.40
Number in family	4.90	2.38	4.86	1.74

The progress of the pupils was measured by a 100-item new-type test, which proved to have a reliability of 0.92 and 0.97 for forms A and B respectively. The test was constructed after examining all published and many informal tests and extracting all questions covering the subject matter to be taught during the experiment. The teachers cooperating in the experiment reviewed these questions and checked any that they did not feel were satisfactory. Then each one individually answered the questions, and all those questions were omitted from the test upon which there was not unanimous agreement as to the key.

One half of each class took Form A of the test at the beginning of the experiment, and Form B at the close. The other half of the class took the two forms of the test in reverse order.

The amount of previous training in home economics showed an insignificant relationship to what pupils knew at the beginning of the experiment, and a negative correlation with what they knew at the end.

Intelligence did not seem to be a significant factor in determining what pupils knew at the beginning of the experiment, nor at the end, when the total groups were compared. It was found, however, that the gain of the most intelligent fourth on the short period over the most intelligent fourth on the long period was significant, being 4.7 times the standard error, while in the poorest fourth the gains were about equal (see table 2).

This would seem to indicate that for the more intelligent pupils, the shorter period is definitely advantageous, if one considers the amount of

information acquired and that perhaps with the limited class period the pupil's intelligence becomes more of a factor, determining the amount she learns. When the long and short period groups were compared on the basis of the difference in scores on the initial and final tests, it was found that the average gain for the long period group was 19.0, and for the short period 23.0. The smallest mean gain (17.0) was made in a long period class, and the largest gain (32.5) in a short period class.

The teaching of similar lessons on the long and the short period was observed in detail; it was seen that time was much more efficiently used in the short period class, both by the teacher and the pupils. In the short period class the pupils were conscious of the time and needed less urging to do their work with dispatch.

TABLE 2

Comparison of achievement in relation to intelligence of the lowest and highest quartiles of each group

(Classified upon the basis of intelligence)

	HIGHEST QUARTILE		LOWEST QUARTILE	
	Long period	Short period	Long period	Short period
Number of pupils	12	14	12	14
Mean score in final test	63.5	68.7	62.0	62.0
Mean gain	14.0	23.0	20.5	18.0
S.D. of distribution	8.94	11.34	10.20	16.77
S.D. of mean gain	8.64	11.00	8.20	15.35

At the end of the course it was found that the pupils in the short period class were doing at home much more work related to school instruction than were those in the long period class, probably indicating greater interest in the subject. But there seemed to be no relation between the quality of school work and the amount of work done at home.

The only really significant relationship discovered in the experiment between measures applied was the correlation between what the pupils knew at the beginning and what they knew at the end of the experiment. This proved to be 0.60 ± 0.06 for the long period group and 0.63 ± 0.06 for the short period group.

Conclusions. From all observations made and data studied, it would appear that ninth-grade foods work can be taught successfully on the hour period, providing the time distribution is planned carefully by teacher and pupils. It made little difference to the poorer pupils whether the period was long or short, although they did slightly better on the

long period. The brighter pupils, however, accomplished more in the short period (in a third less time) than did the better pupils in the long period classes.—KATHERINE E. BRAITHWAITE, *Baltimore County Public Schools, Baltimore, Maryland.*

A COMPARISON OF TOTAL FOOD COSTS IN COLLEGE DINING HALLS. A knowledge of an approximate cost of meals served to students in colleges and universities is of vital importance to both the director of a dining hall and the heads of departments of home economics. In providing an adequate diet for college students, the amount to be spent for food materials is limited by what must be allowed for such items as overhead, labor, and perhaps profit. Study of the literature reveals little definite information on the subject, so figures have been collected from a few more or less comparable college dining halls in institutions of the middle west and the Pacific coast, to show at least roughly the comparative costs per person per day of food materials, overhead, and labor and management. In most cases these were reported in terms of money expended, but in two the figures given represent only the proportion of the total cost attributed to the various groups of items. The items included under overhead and labor were not identical in the various institutions, nor was the same service included under the heading "labor." The data are far from complete or accurate, but in the dearth of more satisfactory information, they may be of interest to managers of college dining halls and teachers of institution economics. They are summarized in the accompanying table (see p. 758).

It may be of interest to see what items were included under overhead in the various institutions reporting this information:

A. *Large city university, middle west, women's hall.* Repairs and maintenance; ice; fuel; heat, light, and power; auto expense; meat market expense; supplies; laundry; university charge for building; replacement; miscellaneous expense; insurance; stationery, printing, and office supplies; depreciation.

B. *State college of agriculture, middle west.* Light, gas, steam (for cooking), telephone, electricity (cooking and power equipment), rent, supplies, laundry.

C. *State university, college of agriculture and home economics, middle west.* Building and grounds (repairs and maintenance), equipment, extermination, fuel, gas, telephone, cleaning supplies, refrigeration, fire insurance, assistant's room rent, miscellaneous, university service charge.

D. *State college of agriculture, Pacific coast, women's hall.* Heat, fuel, light, power, water, telephone, laundry, transportation.

E. *Privately endowed college of liberal arts, Pacific coast, women's hall.* Entertainment, house, insurance, kitchen, repairs and renewals, taxes, fuel, light, water, heat, cleaning supplies, telephone replacement, refrigeration, equipment, laundry, depreciation.

F. *Privately endowed college, Pacific coast.* Superintendent's salary, labor, water, fuel, light.

G. *State university, Pacific coast, women's hall.* Fuel, heat, light, water, paper supplies, cleaning supplies, laundry, phone, repairs and renewal.

H. *State university, middle west, women's hall.* Wages, subsistence of employees, laundry, social supervision, telephone and telegraph, general supplies, administration, heat and water, light and power, equipment repair and replacement, building repairs, insurance, printing and publishing.

Cost per person per day of food materials, overhead, and labor in college dining halls

DESIGNATION AND DESCRIPTION OF INSTITUTION	FOOD MATERIALS		OVERHEAD		LABOR		TOTAL
	Money cost	Proportion of total	Money cost	Proportion of total	Money cost	Proportion of total	
	cents	*per cent*	*cents*	*per cent*	*cents*	*per cent*	*cents*
A. Large city university, middle west, women's hall	40	46.5	13	15.1	33	38.4	86
B. State college of agriculture, middle west	38	69.1	7	12.7	10	18.2	55
C. State university, college of agriculture and home economics, middle west	32	58.2	13	23.6	10	18.2	55
D. State college of agriculture, Pacific coast, women's hall		51.9		12.2		27.3[a]	
E. Privately endowed college of liberal arts, Pacific coast:							
Men's hall	72	63.2	3[b]	2.6	39	34.2	114
Women's hall	50	52.6	33	34.8	12	12.6	95
F. Privately endowed college, Pacific coast	48	68.6	21	30.0	1	1.4	70
G. State university, Pacific coast, women's hall	34	60.7	5	8.9	17	30.4	56
H. State university, middle west, women's hall		45.0[c]		10.0		12.0	

[a] Includes insurance; does not include 8.6 per cent allowed fo miscellaneous items and profit.

[b] Laundry only; other overhead costs not obtainable.

[c] In addition, 13 per cent allowed for cost of preparation.

Under the heading labor are included wages paid to waitresses and salaries of staff.

There is considerable variation in the figures for each of the three

groups of items. This may be due in part to differences in current prices in different regions. For example, dairy products are in general less expensive and fruits more expensive in the middle west than on the Pacific coast. The general policy of the institution also affects the cost of meals. Thus, institution C reported that it operated its dining room practically on a basis of money actually expended, the aim of the school being to attract rural boys and girls by low rates for tuition, board, and room. Another explanation of some of the variations is undoubtedly the difference in the ability of the staff employed for the management of the various dining halls.—MARY O'LEARY, *Claremont Inn, Pomona College, Claremont, California.*

EDITORIAL

INTERNATIONAL EDUCATION MEETINGS IN DENVER. About the time when this JOURNAL is put in the mails, educators from many parts of the world will be arriving in Denver for the Fourth Biennial Conference of the World Federation of Education Associations which is to be held there from July 27 to August 1. The last such conference, it will be remembered, was held in Geneva in 1929, and recently published proceedings show the wide range of its interests. There were sectional meetings on nineteen subjects, among them home, school, health education, rural life and education, the preschool child, adult education. Similar ones will be held in Denver, many of them of interest to home economists. Guest speakers at the general sessions will include P. Seshadri of Cawnpore, India; Professor H. Radlinska of Warsaw, Poland; Frank Goldstone, general secretary of the National Union of Teachers of England and Wales; Dr. Ping Wong Kuo of Shanghai, China; Count Hirotaro Hayashi, president of the Imperial Japanese Education Association, Tokyo, Japan; Dr. Harry Charlesworth, general secretary of the British Columbia Teachers Association; and Professor don Pablo Martinez del Rio, Mexico.

Various other organizations of kindred interests will also meet in Denver while the World Federation is in session. The American Child Health Association, for example, will hold its annual convention in conjunction with the Health Section.

Perhaps of greatest interest to home economics will be the sessions of the International Federation of Home and School, which is also closely associated with the International New Education Fellowship, an organization in the progressive education movement. The president of the International Federation is Mrs. Arthur Reeves, for many years president of our National Congress of Parents and Teachers, and the directors from the United States are Mrs. S. M. N. Marrs, who succeeded her in the National Congress, and Miss Edna N. White, president of the National Council of Parent Education. There are five standing committees: on child study and parent education, of which Dr. W. E. Blatz of Toronto is chairman; on education, Mlle. Marie Butts of the International Education Bureau, chairman; on health, Dr. Thomas D. Wood

of New York, chairman; on rural life, Miss Grace E. Frysinger of the United States Department of Agriculture, chairman; on the home, Miss Florence E. Ward, United States Department of Agriculture, chairman, and Miss H. W. Atwater, editor of the JOURNAL OF HOME ECONOMICS, secretary. It is hoped in a later issue to tell something of the reports they make at Denver and of other features of the program.

THE BILL OF RIGHTS FOR THE HANDICAPPED CHILD. Through the White House Conference, the needs of the handicapped child have been brought to the attention of the educational world in a new light. The Thirteenth Article in the Children's Charter is devoted to this cause and claims:

> For every child who is blind, deaf, crippled or otherwise physically handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met.

In addition, the following bill of rights submitted by the committee appointed to consider the needs of the "different" child, is incorporated in the findings of the Conference.

> The handicapped child has a right
>
> 1. To as vigorous a body as human skill can give him.
> 2. To an education so adapted to his handicap that he can be economically independent and have the chance for the fullest life of which he is capable.
> 3. To be brought up and educated by those who understand the nature of the burden he has to bear and who consider it a privilege to help him bear it.
> 4. To grow up in a world which does not set him apart, which looks at him, not with scorn or pity or ridicule—but which welcomes him, exactly as it welcomes every child, which offers him identical privileges and identical responsibilities.
> 5. To a life on which his handicap casts no shadow, but which is full day by day with those things which make it worth while, with comradeship, love, work, play, laughter and tears—a life in which these things bring continually increasing growth, richness, release of energies, joy in achievement.

In an attempt to apply this bill of rights to the average school system, we find big gaps in the provision for exceptional children. This was brought out by Commissioner Cooper when he spoke to the Department of Superintendence in Detroit last February on the question "Shall We Look the Other Way?"—a talk printed in *School Life* for March. To discover which of these gaps may be partially or wholly filled by home

economics is quite as difficult as putting the camel through the needle's eye, but the papers grouped on pages 732 to 746 of this *Journal* show that home economists have no thought of "looking the other way."

EDUCATION FOR CHILDREN WITH DIFFERENT HANDICAPS. The scope of this problem is wider than most of us realize. "Pennsylvania's 13-point program for the handicapped," described by Frank H. Reiter in the February issue of *School Life*, includes not only the blind, the deaf, the crippled, the tubercular, those with speech defect, and the mentally subnormal, but reveals equal need for a flexible, unconventional educational régime among the non-English speaking, the convalescent, the delinquent, and the exceptionally gifted.

Even a casual survey of educational developments in this field shows interesting pioneering. More and more frequently the eye catches such newspaper headlines as: "Education of 'Exceptional' Children Provided by California Schools," "New Mexico Builds School for Defectives," and "New York Offers Summer Training Courses for Teachers of Physically Handicapped Children."

What is being done to educate the blind is shown in the "Social Work Yearbook, 1929" by Robert R. Irwin, executive director of the American Foundation for the Blind. It also appeared in the discussions at the World Conference on Work for the Blind, held last April in New York under the auspices of the Foundation. Delegates from thirty-seven nations reviewed pertinent social, industrial, and educational progress of the last thirty years and considered occupational opportunities open to blind persons who have had special vocational training. In April, also, the first issue of the quarterly *Sight Saving Review*, was published by the National Society for the Prevention of Blindness, which in various ways is increasing its efforts for the conservation of sight. State education departments are striving to overcome illiteracy among the blind by special public school classes, a corps of traveling home instructors, and free mailing of books with raised type.

Progress in education for the deaf was reflected in the program of the recent conference of the American Federation of Organizations for the Hard of Hearing, and also in the two magazines, the bimonthly *American Annals of the Deaf* and *The Vocational Teacher*, a quarterly devoted to vocational instruction in American schools for the deaf.

The needs of crippled children were brought to public attention in this country last May through the conference which the International So-

ciety for Crippled Children held in Cleveland, and which Miss Mary Parker of Western Reserve University kindly attended in behalf of the JOURNAL. The same Society also held a world conference at the Hague in June and publishes a magazine devoted to the welfare of the crippled, their care, relief, education, and employment. Information for the American school administrator who is alert to the needs of children made "different" by this type of handicap is summarized in "Education of Crippled Children," United States Department of the Interior, Office of Education Bulletin, 1930, No. 11.

The mentally atypical child may be the normal child retarded by illness, the problem child, the dull child, the slightly subnormal child capable of acquiring skill in vocational training but incapable of skill in literary or academic work, the moron or near idiot. Different educational procedures are needed for these different degrees of handicap, and also, as is being more and more emphasized, for the budding geniuses at the other end of the scale. The January issue of *Mental Hygiene* carries an article entitled "Why Special Classes" by Meta L. Anderson, in which is suggested a tentative program for the atypical based on mental classification and showing the needs of each group in the matter of educational policy, social placement, individual curriculum adjustment, suitable vocational training and guidance, and supervision in industry.

An encouraging feature of the whole situation is the active interest of physicians, psychologists, and social workers in getting at the causes of all such handicaps.

HOME ECONOMICS AND THE EDUCATION OF THE HANDICAPPED CHILD. Home economics has much to offer the child who enters the race for survival and happiness, beaten at the start unless therapy, science, and human understanding can help him to reach his fullest development, can shield him from unfair competition and, so to speak, drag the track for him where the going gets too rough. Honest efforts are being made by home economists to discover which of its possible contributions will be most effective in this connection and when and how they may best be offered. The department of elementary and secondary schools of the American Home Economics Association at Detroit in June heard the report of a special committee on the present extent of such work in the public schools and also clear accounts of the work done by home economics classes for the handicapped of various types and levels. This report and one of the papers are included among

those assembled on pages 732 to 746 of this JOURNAL, along with descriptions of similar work for the blind, deaf, and psychopathic.

Many other schools have been and are experimenting with the problem. In Portland, Maine, for instance, class work has for nine years been offered to girls of "special" or "opportunity" groups, either in a separate building and in competition with the members of their own group or in laboratories with normal groups. The existing programs for the education of these special groups necessarily disclose wide variation in objectives, ranging from mastery of speech, walking, and dressing to a college degree. As a rule, when the age and mentality of the pupils warrant, class work is offered in house care, child care, clothing, and foods, all presented to emphasize skills with vocational or pre-vocational value. Frequently the home economics department is responsible for the school lunch, towards the preparation of which pupils may or may not contribute, and through which may be developed good eating and health habits. Classes are small and highly socialized, routine is subservient to interest, progress is slow, and procedures are adapted to individual needs. Whatever may be its value for normal children, the integrated program, described on pages 535 to 546 of the June issue, appears practically indispensable for such children whose handicaps are likely to have been caused by constitutional weakness and to involve loss of sensory capacity and ability for concentration and muscular coordination. In discussing vocational rehabilitation before the International Society for Crippled Children, Mr. Foster emphasized that vocational guidance, education, and placement for the crippled are one problem, and "employability" hinges on the combination of physical and mental training designed to make the personality of the cripple socially acceptable.

Practically all deaf and blind girls of normal mentality and girls who are physically able but mentally slightly subnormal can be taught the skills essential for homemaking, and frequently can acquire sufficient skill in kitchencraft, laundrycraft, or needlecraft to earn a livelihood. A prevalence of home economics subjects is seen in a study which Mrs. Hazel Thompson Craig reported in the *American Annals of the Deaf* for November, 1928.

The ideals of the "bill of rights" for handicapped children will be approached only as research workers, specially trained teachers, sympathetic administrators, and all medical and social agencies concerned make cooperative effort. The goal is to give to each child adequate tools for his happy social adjustment and independence. No one who enjoys a whole, well body and normal mentality can doubt the justice and wisdom

of striving towards such a goal after he has watched a baseball game where the successful batter makes his base in a wheel chair, or seen the rhythm of crutches and braces in a Maypole dance, or glimpsed the triumph on the face of the little spastic as he successfully takes five steps without holding to his gang-plank sort of walker or "climbs the mountain" without knocking down the small piles of blocks of which it is made. The casual visitor to such a place as the Weightman School for Cripples in the city of Washington risks also carrying away with him new ideas about the possible meaning of joy of achievement, socialized atmosphere, and independence. His good two ears are likely to ring for many days with the quavering but enthusiastic singing of some childish little ditty:

Today the whole world seems to say
'Tis May, 'tis May, 'tis May!

HOME ECONOMICS AND THE PREVENTION OF HANDICAPS. To avoid a problem is better than to solve it; hence, the dissemination of knowledge concerning the more frequent underlying causes of handicaps and the positive measures which may be taken to avoid them is a legitimate part of education. In reporting the discussion at the Cleveland meeting of the International Society for Crippled Children, Miss Parker refers to the importance placed upon the diffusion and vitalizing of knowledge already available and upon the fact that as a nation we seem more keenly aware of the need for ameliorative work than for preventive measures.

Important in the prevention of crippling are proper information centers for mothers and others concerned with the care of infants and children and a more general knowledge of prenatal, infant, and child nutrition. Accidents are another important cause of crippling, and since many of these occur in the home, they have a direct relation to the teaching of household management and equipment—a fact recognized both by the National Safety Council and the American Home Economics Association in the study of which Miss Zurrer gave a progress report at Detroit. Sane and healthful recreation lessens crippling by avoiding dangerous sports on the one hand, and on the other, by lessening the susceptibility to disease.

Perhaps best of all the possible contributions of home economics to the lessening of handicaps is its increasing emphasis on the value of clean, well-ordered homes established by persons who understand and respect

the laws of eugenics, hygiene, and social welfare, and who, thanks to pre-parental training, have been made more competent to avoid the causes of handicaps in their children.

RECREATION AND HOME ECONOMICS. The direct relation of the use of leisure to home and family life gives all home economists and all homemakers more than an ordinary interest in the program of the National Recreation Association. President Hoover showed his belief in its national significance by inviting the board of directors to hold their twenty-fifth anniversary meeting in the cabinet room of the White House last April. The proceedings, carried in full in supplement to the *United States Daily* for April 27, confirm one's impression as to the wisdom of its plans and the high character of its active supporters, who include national and state executives, judges and attorneys, editors and publishers, philanthropists and bankers, social leaders and social scientists. Dr. John H. Finley presented the situation by saying that the greatest economic problem today was how to insure minimum employment for all; and the greatest social problem, how to make free time a blessing to men, women, and children. He also listed new conditions in today's social order, offered tentative suggestions for the constructive use of leisure, and showed that the year-round recreation program should concern itself with community recreation for all groups through a broad program of activities striving toward definite objectives. Others stressed the civic importance of an inclusive program for furthering wholesome recreation and the need for research and leadership which will place American play life on the highest possible plane and keep it there.

The final resolutions call for a nation-wide drive to turn the present enforced leisure into a blessing for adults by encouraging sensible recreation made available at minimum expense through national and municipal provision, rather than to encourage "the frenzied seeking of sensation in barren pleasures"; to reduce crime by offering more alluring pastime and more satisfying companionship than can be found among the lawbreakers; and to reduce accident among children by providing more adequate municipal play space freer from danger than the city street and by staffing such places with professional leaders who may give adequate instruction to those who wish to acquire specific skills and encourage in all the spirit of fair play and real sportsmanship.

The promotion of such a program calls essentially for an endowment of not less than ten million dollars and the support of all who see in "leisure

for everybody, the opportunity for every man to live." The opening article in this issue was contributed by the National Recreation Association to show how its aims dovetail into those of home economics. The paper will be welcomed for its charming and forceful presentation of the opportunity open to the homemaker and the home economist to help direct the "portentous possibilities for good" which are "dormant in universal leisure."

BABIES AND APARTMENT HOUSES. The wails of the infant are almost as popular in the comic strip and the funny column as mothers-in-law and flivvers. Unfortunately, this unpopularity of babies as neighbors has a more serious aspect, both to those whose rest is broken by the noise of their neighbors' children and to those who want a comfortable place to live, despite the fact that they have children. We all know that many desirable apartment houses refuse to consider tenants with small children, and that others seem to have just filled up mysteriously whenever such families make application, but heretofore no one has tried to find out how general this aversion really is.

Recognizing that the matter has a genuine social importance, the Institute of Family Relations in Los Angeles decided to do a little investigating, and discovered that the baby born in that city has only half a chance to get a roof over his head when he leaves the hospital, if his parents must live in an apartment. The Institute reports that it

> called up the first 300 apartment houses listed in the telephone book, and asked if they would rent an apartment to a young couple with a six-months' old baby. It was stipulated that the family also included a well-trained dog.
>
> Forty-two per cent of the apartments would not admit either a baby or a dog to their premises, while 29 per cent would take both. The baby was accepted but the dog rejected in 19 per cent; the dog was welcome but the baby excluded in 10 per cent.
>
> The apartment houses which refused to admit a family with even one child were, on the whole, superior in location and attractiveness, while those which offered hospitality to the baby were, in general, considered less desirable as residences.

PIONEER COURSES ON THE FAMILY. The institution which first offered an academic course in the study of the family arranged by a home economics department was said on page 324 of the March JOURNAL to be the Stout Institute, Menomonie, Wisconsin. We have since learned that such work was offered at the University of Wisconsin in 1909–10, while no reference is found in Stout catalogs before 1913.

NEWS. Because the summer months find home economics doings at a low ebb and the regular news gatherers of the JOURNAL OF HOME ECONOMICS are scattered for vacations, the magazine has adopted the practice of omitting news notes from the September and October issues. They will appear again in November.

CHANGE OF ADDRESS. At this season when many addresses are changed, subscribers are reminded that to avoid delay in receiving the JOURNAL they should report such changes promptly to the business manager, 101 East 20th Street, Baltimore, Maryland.

MAILING OF SEPTEMBER JOURNALS. Because so many subscribers are away from home when the September issue of the JOURNAL would regularly be sent out, it will not be placed in the mails until a few days after the first of the month.

DETROIT, JUNE 22 TO 27. Registration, 1653, breaking the previous record by 355; budget satisfactorily balanced; total membership to date, 10,320; programs interesting and reflecting progress throughout the field; arrangements for comfort and entertainment excellent; prevailing spirit, one of friendliness and vitality; Dr. Esther McGinnis appointed field worker in child development and parental education; place for 1932 meeting, Atlanta, Georgia—these "high lights" of the twenty-fourth annual meeting of the American Home Economics Association are caught as this JOURNAL is going through the press. Reports of the business transacted will go to members in the September *Bulletin*. Papers read at Detroit will fill nearly the whole of the October JOURNAL.

LOS ANGELES, JULY 1 AND 2. From the meetings of the Department of Supervisors and Teachers of Home Economics held in connection with the National Education Association we give the following facts: Total membership to date 501. Officers elected: chairman, Miss Helen Goodspeed, Philadelphia; vice-chairman, Miss Carlotta Greer, Cleveland; secretary-treasurer, Miss Mary Buckley, Paterson, New Jersey. More details will appear in October.

RESEARCH

THE EFFECT OF COFFEE UPON THE BASAL METABOLISM OF YOUNG WOMEN[1]

HELEN HACKETT

Norman, Oklahoma

BECAUSE coffee is a very widely used beverage in this country, especially for breakfast, and is considered by many people to be a stimulant, it was decided to investigate whether the habitual moderate drinking of coffee, say one or two cups a day over a period of years, has any effect upon the basal metabolism of young women.

The term basal metabolism, as here understood, designates the post-absorptive heat production of an individual at complete muscular rest, well-relaxed but awake, clad in comfortable clothing, and in an environment temperature near 20°C (1). The heat production is tested after a night's sleep and a fast of 12 to 18 hours and following a preliminary rest period of at least 30 minutes.

The heat production may be measured by the direct method in which the heat produced by the individual is determined from the increase in the temperature of water circulating around an air-tight chamber in which the subject is placed, or by the indirect method in which the energy value is calculated from the amount of either the carbon dioxide eliminated or the oxygen consumed by the subject (1). Increased energy metabolism means that the body is living at a faster rate and, therefore, needs more food for this added production.

The factors usually suggested as influencing the metabolic rate are age, sex, size and shape of the body, sleep, the character of the diet, and the after-effect of severe muscular work (2, 3). Other factors more recently considered are race (4, 5), emotional states (6, 7), the menstrual cycle (8), internal secretions (3, 9) and certain drugs (10).

[1] The data in this paper are taken from a thesis submitted in partial fulfillment of the requirements for the degree of master of science in the graduate school of the University of Oklahoma, 1930. Appreciation is expressed for the many courtesies and helpful suggestions rendered by Dr. Helen Brown Burton and Miss Laura Adele Miller.

Coffee and tea were reported (10) to have increased the heat production of six diabetic patients free from glycosuria, from 12 to 23 per cent. Schoen and Kaubisch (11) found that caffein injected subcutaneously caused an increase in the energy metabolism of 15 to 20 per cent. Coffee likewise caused a rise in the metabolic rate according to studies by Schimmel, Dye, and Robinson (12).

In noting the effect of a drug, the usual plan is to determine the actual stimulating effect of the drug at the specific time it is ingested. In the present study the purpose was rather to note whether coffee had any constant stimulating effect when used habitually by normal young women; that is, whether the basal metabolism of coffee drinkers was above that of comparable non-coffee drinkers.

The subjects of the experiment were 30 normal college women, 15 of whom had never drunk coffee and 15 of whom drank coffee daily at breakfast and occasionally at other times. All the women were within 10 per cent above or below the standard weight for height and age, were apparently in good condition, and had no organic difficulties that might affect the basal metabolism. The majority had had physical examinations within the last year. It is interesting to note that considerable difficulty was encountered in finding 15 young women of normal weight who were coffee drinkers, many otherwise possible subjects being underweight. There was no such difficulty in obtaining non-coffee-drinking subjects.

The procedure was the one usual in this type of experiment. The subjects came in the morning before breakfast and rested 30 minutes before the running of two tests of 8 to 10 minutes each with an intervening rest period of 5 to 10 minutes. If the results of the tests for these two periods did not check within 5 per cent, (10 cc. of oxygen) the day's record was discarded. The average of the two periods was taken as that day's observation. Determinations were made on two different days, avoiding the menstrual period and including only the results for two days that agreed within 10 per cent. The temperature of the subject was taken to rule out any possible condition of fever and the pulse counted during both the rest and the test periods.

The Benedict-Roth recording metabolism apparatus (13) was used.

The results of the metabolism determinations are given in tables 1 and 2. The figures for each subject represent the average of the two observations agreeing within 10 per cent. Throughout the table and the discussion the predicted standards lowered 5 per cent as suggested by Benedict (14) are used.

TABLE 1

Average basal metabolism, group 1, non-coffee drinkers

SUBJECT NUMBER	AGE	HEIGHT	WEIGHT	OXYGEN CONSUMED PER MINUTE	HEAT PRODUCTION PER HOUR								
					Actual	Predicted		Deviation of actual from predicted		Corrected predicted*		Deviation of actual from corrected predicted	
						Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict
	years	*inches*	*pounds*	*cc.*	*calories*	*calories*	*calories*	*per cent*	*per cent*	*calories*	*calories*	*per cent*	*per cent*
1	20	62	127.5	251	60.52	58.09	58.5	+4.1	+3.4	55.32	55.7	+8.5	+8.6
2	20	66	123.0	216	52.32	60.31	58.4	−13.2	−10.4	57.43	55.6	−9.7	−5.9
3	20	66	132.0	209	49.63	62.16	60.0	−20.1	−17.2	59.20	57.1	−16.1	−13.1
4	20	62	116.5	187	44.64	56.61	56.1	−21.1	−20.4	53.91	53.4	−17.0	−16.3
5	20	65	122.0	192	47.06	59.20	57.6	−20.5	−17.3	56.38	53.9	−16.5	−12.7
6	22	66	130.0	222	53.71	62.16	60.0	−13.5	−10.4	59.20	57.1	−10.9	−5.0
7	23	62.5	113.0	212	47.72	55.50	55.3	−14.0	−13.7	52.85	52.6	−9.7	−9.3
8	23	64	120.0	196	46.67	58.46	57.3	−20.1	−18.5	55.67	54.5	−16.1	−14.4
9	23	62	109.0	176	43.19	54.76	54.5	−21.1	−20.4	52.15	51.9	−17.1	−16.8
10	24	64	116.0	196	46.80	57.35	56.5	−18.3	−17.1	54.62	53.8	−14.3	−15.0
11	26	69	134.0	222	55.45	64.38	59.8	−13.8	−7.2	61.31	57.0	−9.5	−2.7
12	26	60.75	111.0	188	45.88	54.39	54.3	−15.6	−15.5	51.80	51.7	−11.4	−11.2
13	26	66	130.0	206	51.24	62.16	59.4	−17.5	−13.7	59.20	56.5	−13.4	−9.3
14	26	67	145.0	218	52.45	65.49	61.8	−19.8	−15.1	62.37	58.8	−15.9	−10.8
15	32	64	141.0	229	55.60	61.32	60.3	−9.3	−7.7	58.40	57.4	−4.8	−3.1
Total.....	351	966.25	1,870.0	3,120	752.88	892.34	869.8	−233.8	−201.2	849.81	827.0	−173.9	−135.0
Average...	23	64.41	125	208	50.19	59.48	57.9	−15.5	−13.4	56.65	55.8	−11.6	−9.0

* Lowered 5 per cent as suggested by Benedict (14).

TABLE 2

Average basal metabolism, group 2, coffee drinkers

SUBJECT NUMBER	AGE	HEIGHT	WEIGHT	OXYGEN CONSUMED PER MINUTE	HEAT PRODUCTION PER HOUR								
					Actual	Predicted		Deviation of actual from predicted		Corrected predicted*		Deviation of actual from corrected predicted	
						Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict	Aub-DuBois	Harris-Benedict
	years	*inches*	*pounds*	*cc.*	*calories*	*calories*	*calories*	*per cent*	*per cent*	*calories*	*calories*	*per cent*	*per cent*
16	18	68.5	128	241	59.63	64.60	60.0	−7.6	−0.6	61.52	57.1	−3.0	+4.4
17	18	65.0	128	218	52.54	62.32	59.2	−15.6	−12.6	59.35	56.4	−11.1	−6.8
18	19	62.0	109	196	48.12	56.62	55.3	−15.0	−12.9	53.92	52.7	−10.9	−8.6
19	20	67.5	142	213	51.93	65.12	62.0	−20.2	−16.0	62.01	59.0	−16.2	−12.0
20	20	66.0	143	222	54.55	64.38	62.4	−15.2	−12.2	61.31	59.0	−11.0	−7.5
21	21	65.0	117	199	48.22	58.46	56.8	−17.5	−15.1	55.68	54.1	−13.3	−10.8
22	21	65.0	121	189	45.47	59.20	57.6	−23.1	−21.0	56.38	54.9	−19.3	−17.1
23	22	67.75	141	251	60.90	65.12	62.0	−6.4	−1.7	62.01	59.0	−1.7	+3.2
24	22	62.0	120	233	55.99	56.98	56.9	−1.7	−1.5	54.25	54.1	+3.2	+3.4
25	22	64.0	118	212	51.60	57.72	56.5	−10.6	−8.6	54.97	53.8	−6.1	−4.0
26	23	66.0	144	241	59.22	63.78	61.6	−7.1	−3.8	60.74	58.7	−2.5	+0.8
27	25	66.0	123	233	55.81	60.31	57.8	−7.4	−3.4	57.44	55.0	−2.8	+1.4
28	25	64.5	137	207	50.40	61.79	59.8	−18.4	−16.5	58.85	56.9	−14.2	−11.4
29	26	64.0	135	211	50.21	61.42	58.7	−18.2	−14.4	58.49	55.9	−14.1	−11.0
30	28	62.0	122	219	52.83	56.98	55.9	−7.2	−5.4	54.27	53.2	−2.6	−0.6
Total.....	330	975.25	1,928	3,285	797.42	914.80	882.5	−191.2	−145.7	871.19	839.8	−125.6	−76.6
Average...	22	65.01	128	219	53.16	60.98	58.8	−12.7	−9.7	58.07	55.9	−8.3	−5.1

* Lowered 5 per cent as suggested by Benedict (14).

The average metabolism of the non-coffee drinkers was 50.19 calories per person per hour. The predicted heat production per person per hour according to Aub-DuBois was 56.65 calories and according to Harris-Benedict, 55.8. The percentage deviations from these revised standards were −11.6 (Aub-DuBois) or −9.0 (Harris-Benedict).

The coffee drinkers had an average metabolism of 53.16 calories per person per hour, an increase of 2.97 calories or 5.9 per cent over the non-coffee drinkers; these figures were 8.3 per cent below the Aub-DuBois standards of 58.07 calories or 5.1 per cent below the Harris-Benedict standard of 55.9 calories per person per hour.

For further comparisons, the subjects were divided into two classes: Class 1 made up of those whose basal metabolism was above or not more than 10 per cent below the standards and representing the more nearly normal group; and Class 2 made up of those more than 10 per cent below the standards. More coffee drinkers were found in Class 1 and more non-coffee drinkers in Class 2. There were twice as many coffee drinkers with the higher metabolism as there were with the lower metabolism (Harris-Benedict), and twice as many non-coffee drinkers with the lower metabolism as there were with the higher metabolism (Aub-DuBois).

In order to see more clearly the relation between figures for coffee drinkers and for non-coffee drinkers, the percentage deviations from the standards were rearranged, starting with the figure highest above the predicted standard and ending with the figure furthest below the standard. The result shows very definitely that whichever standard is used the figures for the coffee drinkers had a tendency to be higher than those for those who did not drink it, the greatest difference being about 9 per cent. The further below the standard the metabolic rates were, the more nearly the figures for the two groups approached each other. Also, the nearer normal the metabolic rate was, the greater was the effect of the coffee. One must admit that the difference for the two groups was not great, but inasmuch as the metabolic rate for the coffee drinking group was, with two exceptions, consistently above that for the non-coffee drinking group, it is probably worthy of consideration.

It is of interest to compare the figures obtained in this study with those of other studies made on groups of young women, no doubt containing both coffee drinkers and non-coffee drinkers.

In group 1 (non-coffee drinkers) the range deviation from the predicted was from +8.6 per cent to −16.8 per cent (Harris-Benedict) or +8.5 per cent to −17.1 per cent (Aub-DuBois). This was a little wider range

than that obtained by Tilt in Florida (15), whose results ranged from +1.8 per cent to −18.5 per cent (Harris-Benedict) or +2.7 per cent to −20.5 per cent (Aub-DuBois). Group 2 (coffee drinkers) had a range of deviation from the standard of +4.4 per cent to −17.1 per cent (Harris-Benedict), or +3.2 per cent to −19.3 per cent (Aub-DuBois). This range was not as great as that for group 1 (non-coffee drinkers), but practically the same as that found by Tilt.

The average per cent of deviation for group 1 (non-coffee drinkers) was −11.6 per cent (Aub-DuBois), or −9.0 per cent (Harris-Benedict), and for group 2 (coffee drinkers) it was −8.3 per cent (Aub-DuBois) or −5.1 per cent (Harris-Benedict). These figures are not so low as the average of a group studied by Hafkesbring and Brogstrom in New Orleans (16), which was −18.0 per cent (Aub-DuBois) or −16.0 per cent (Harris-Benedict). The deviations of the group in the present study were considerably greater than the deviation of a group of 20 Wellesley College students reported by Gustafason and Benedict (17), which was only −1.8 per cent from the predicted metabolism. Tilt's study made in Florida (15) had a little lower average per cent than group 1 (non-coffee drinkers) but a little higher than group 2 (coffee drinkers), −10.6 per cent (Aub-DuBois) or −9.9 per cent (Harris-Benedict).

Division of the subjects of the present study into classes according to their percentage deviation from the predicted standard showed, when compared with the Harris-Benedict standard, 5 times as many coffee drinkers as non-coffee drinkers above the standard, approximately the same number of each from 0 to 10 per cent below the standard, and $1\frac{1}{2}$ times as many non-coffee drinkers as coffee drinkers, 10 to 20 per cent below the standard. Using the Aub-DuBois standard, the numbers in the various classes are slightly different. However, both sets of figures show very plainly that, whichever standard is used, more non-coffee drinkers than coffee drinkers were found in the classes with low metabolic rates; or that the metabolism of the coffee drinkers tended to be higher than that of the non-coffee drinkers.

Conclusion. Experimental evidence presented in the present study leads to the conclusion that the drinking of coffee over a period of years has a tendency to raise slightly the basal metabolism of normal young women.

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A COLORIMETRIC IRON METHOD FOR BIOLOGICAL MATERIALS[1]

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FOR nearly two years we have been using in our laboratory a method for the determination of iron in biological materials which has been developed as a modification of the one published by Kennedy[2] for blood and tissues. After a survey of the literature for possible quantitative methods to estimate small amounts of iron, his procedure was selected because of its comparative simplicity, its adaptability to colorimetry, and the stability of the color to fading at room temperatures. The chief alterations adopted are the use of nitric acid in ashing, the control of acidity in both the unknown and standard, and (on a personal suggestion from Dr. Kennedy) the addition of potassium persulfate to each. The technic followed is described below.

Reagents Required. Standard iron solution: 200 mg. of "analytical" iron wire are dissolved in 200 cc. of concentrated sulfuric acid, 10 cc. of concentrated nitric acid, and distilled water to make up to volume of one liter. Twenty-five cc. of the stock solution are diluted to 100 cc. To 25 cc. of this latter, containing the equivalent of 1.25 mg. of iron, are added 25 cc. of sulfuric acid and 1 cc. of nitric acid and the volume made up to 500 cc. Ten cc. of the standard iron solution are equivalent to 0.025 mg. of iron.

Other reagents needed are a 10 per cent potassium thiocyanate solution, 4 per cent potassium persulfate, amyl alcohol, 60 per cent perchloric acid, N/4 NaOH, and a 1:4 H_2SO_4.

Procedure. A sample of the dried, ground material containing at least 0.25 to 0.30 mg. of iron is weighed and digested in a 300 cc. Kjeldahl flask with 5 to 10 cc. of H_2SO_4 and varying quantities of HNO_3. The amounts of both acids are governed by the size of the sample and the type of material to be ashed. The nitric acid is added gradually during the digestion. The analyses are run in triplicate, a standard solution equivalent to 0.25 mg. of iron being added to one of the three before ashing. When the digestion mixture is practically clear, 4 cc. of 60 per cent perchloric acid are added and ashing is continued for one-half hour. After diluting with approximately 150 cc. distilled water and heating

[1] Paper No. 33, Journal Series, Georgia Experiment Station.

[2] KENNEDY, R. P. The quantitative determination of iron in tissues *J. Biol. Chem.* **74**, 385–391 (1927).

over a hot plate for about an hour to insure complete solution of the ferric iron, the solution is transferred to a 100 cc. volumetric flask and made up to volume. Five cc. are titrated with N/4 NaOH, using alizarin as an indicator.

Ten cc. of the unknown, or an aliquot thereof, are pipetted into a 50 cc. glass stoppered cylinder, enough 1:4 H_2SO_4 is added to make an acidity equivalent to 90 cc. N/4 NaOH, and then distilled water is added to bring the volume up to 15 cc. One drop of concentrated HNO_3, 0.5 cc. of 4 per cent potassium persulfate, 10 cc. of amyl alcohol, and 5 cc. of 10 per cent potassium thiocyanate are added in order and the whole thoroughly shaken. The colored alcohol layer is removed with a pipette and compared in a colorimeter with the standard iron solution treated similarly and containing 0.025 mg. of iron. The unknown should have practically the same amount of iron, as the color is far more satisfactorily matched when it approximates that of the standard. The accompanying table gives but few of many results upon the foods listed which are representative of types investigated.

Discussion. The usual care was taken in handling the food and feces to keep them free from iron contamination. The samples were ground in a Ball mill and digested in a small fume chamber of acid-proof brick built into the hood. The data are on dried samples exclusively, even for such foods as milk, since a number of those listed were used in a utilization study and were not analyzed for iron until a later period.

As varying amounts of nitric acid were used in ashing, blanks were run on C. P. saccharose plus 25 cc., 50 cc., and 100 cc. of the acid, respectively. To each determination were added 10 cc. of a standard solution containing 0.25 mg. of iron. In analyzing foodstuffs which are extremely low in iron, two series were run, one in which the usual technic was followed, i.e., the standard solution was added to only one of the unknowns, the other in which it was added to all three. The results of the latter procedure have been tabulated.

Only one standard has been used throughout. In all our work it has been possible to repeat any analyses too low in iron to determine satisfactorily, and we have found it a decided advantage to read the color produced by a solution containing 0.025 mg. of iron.

Recently, we have adapted this procedure to the hydrocholoric acid extract of foods ashed in an electric furnace. After the extracted ash is made up to volume an aliquot is taken, digested with 2 cc. H_2SO_4, 5 cc. HNO_3, and 2 cc. 60 per cent $HCLO_4$ and treated in exactly the same manner as described above.

Iron determinations in a few representative materials

SAMPLE	WEIGHT OF DRIED SAMPLE	TOTAL IRON IN SAMPLE*	REMARKS
	gm.	*mg.*	
Saccharose + 25 cc. HNO_3	2.0	0.2542	0.25 mg. Fe added
Saccharose + 50 cc. HNO_3	5.0	0.2586	0.25 mg. Fe added
Saccharose + 100 cc. HNO_3	5.0	0.2679	0.25 mg. Fe added
Cabbage	7.0	0.2093	
		0.2078	
		0.4586	0.25 mg. Fe added
Turnip greens	2.5	0.6350	
		0.6281	
		0.8791	0.25 mg. Fe added
Collards	2.0	0.2190	
		0.2190	
		0.4651	0.25 mg. Fe added
Canned apples	10.0	0.4664	
		0.4702	
		0.7131	0.25 mg. Fe added
Bread	10.0	0.1922	
		0.1909	
		0.4417	0.25 mg. Fe added
Rice	8.0	0.2876	0.25 mg. Fe added
		0.2876	0.25 mg. Fe added
Milk	5.0	0.2778	0.25 mg. Fe added
		0.2749	0.25 mg. Fe added
		0.2778	0.25 mg. Fe added
Feces	2.0	10.46	
		10.47	
		10.57	

* Except for saccharose, all results are corrected for blank.

Summary. A colorimetric iron method is described that has been applied to a number of biological materials which may be wet or dry ashed with equal success. There will be occasion to extend further the scope of this investigation, but in consideration of the types of foods thus far analyzed little difficulty is anticipated.

BOOKS AND PERIODICALS

NEW BOOKS

Small Homes of Architectural Distinction. A Book of Suggested Plans. Edited by ROBERT T. JONES. New York: Harper & Brothers, 1931, pp. 278, $5.00.

The second printing of a collection of photographs, perspective drawings, outline floor plans, and brief descriptions of 240 or more small houses designed for the Architects' Small House Service Bureau, Inc., the latter controlled by the American Institute of Architects and endorsed by the United States Department of Commerce, and organized to give unbiased professional service at reasonable cost to those who wish to build tasteful, well-planned, and economical small houses. Good reference material for home economics classes interested in housing.

Clinical Dietetics. By HARRY GAUSS. (Assisted by E. V. GAUSS). St. Louis: The C. V. Mosby Company, 1931, pp. 490, $8.00.

A textbook for physicians, students, and dietitians, based on lectures given at the medical school of the University of Colorado. Includes historical introduction, principles of diet, characteristics of food materials, digestion, normal and routine hospital diets, and diets for special disorders, each diet presented in three ways: in detailed, calculated form, arranged as a week's menu, and simply described for the patient himself. Tables of chemical composition and ash and vitamin content of food materials are given in an appendix.

Peasant Costume in Europe. By KATHLEEN MANN. With notes by J. A. CORBIN. New York: The Macmillan Company, 1931, pp. 109, $3.50.

A collection of typical examples of peasant costume from European countries whose traditional dress shows the use of distinctive and interesting design, material, and decoration; with commentary on social life and representative arts which gives background for appreciation of the charming sketches and color plates. Also of practical value to the artist and designer.

Fabrics and Clothing. By SARAH MACBRIDE and ELLEN BEERS MCGOWAN. New York: The Macmillan Company, 1931, pp. 225, $1.00.

Designed to give the girl of junior high school age an appreciation of fabrics in everyday use and a basis for fabric selection and clothing care, this text presents pertinent fundamental facts without the use of technical terms or the confusion of manufacturing detail. The possible uses of the book are more numerous because of its adaptability to any clothing course and its 80 excellent illustrations.

The Treatment of Behavior Disorders Following Encephalitis. By EARL D. BOND and KENNETH E. APPEL. New York: The Commonwealth Fund, Division of Publications, 1931, pp. 163, $1.75.

"An experiment in re-education" carried out at the department of mental and

nervous diseases of the Pennsylvania Hospital in classes for post-encephalitic children established in 1924 and housed since 1930 in the special Franklin School. Suggestive for those dealing with such children under other conditions.

The Mothers. By ROBERT BRIFFAULT. New York: The Macmillan Company, 1931, pp. 319, $4.00.

A discussion of the matriarchal theory of social origins taken mainly from the author's three-volume work, "The Mothers, A Study of the Origins of Sentiments and Institutions," published in 1927. Not too technical for the educated layman, it contains interesting sections on the development of the family and the status of women in primitive and historical civilizations, with the conclusion that "The matriarchal theory of social origins bears undoubtedly upon the claim of women to share in social and intellectual activities in a manner which has been denied to them by the organisation of patriarchal society, but it cannot be adduced as a proof of any biological aptitude. . . . .The practical lesson which the true history of the relations between the sexes does seem to point is that mutual cooperation between them and social equality are more conducive to the smooth working of social organisation than any form of sex antagonism."

Marriage and the Civic Rights of Women. By SOPHONISBA P. BRECKINRIDGE. Chicago: The University of Chicago Press, 1931, pp. 158, $2.00.

The principles of domicile and citizenship affecting women, with special reference to the working of the Cable Act as illustrated by case studies of foreign-born women in Chicago. Especially significant for all concerned with revision of laws affecting the citizenship status of women of foreign birth or marriage.

Five Unifying Factors in American Education. Ninth Yearbook of the Department of Superintendence. Washington, D. C.: The Department of Superintendence of the National Education Association, 1931, pp. 543, $2.00.

This second and final report of the Commission on the Articulation of Units of American Education includes studies in pupil promotion, community relationships, teacher preparation, finance, and principles of articulation. This consideration of vertical inarticulation problems supplements the previous study of horizontal inarticulation between education on elementary, secondary, professional, and higher teacher training and adult levels and points to further educational problems regarding which research is needed.

Principles and Practices in Health Education. New York: American Child Health Association, 1931, pp. 485, $1.50.

Basic principles of building the health education curriculum through the integration of school, home, and community forces as presented in the Sixth Health Education Conference held on Long Island in June, 1930; including a summary of desirable material for a school health program in the elementary and secondary schools and its integration into the general curriculum through activities, situations, and subject matter already conceded to belong to the public schools.

The Buyer's Manual. By MERCHANDISE MANAGERS' DIVISION OF THE NATIONAL RETAIL DRY GOODS ASSOCIATION. New York: National Retail Dry Goods Association, 1930, pp. 265, $2.00.

Practical problems of retail merchandizing discussed from the point of view of the buyer for the dry-goods or depart-

ment store. Of interest to students of consumer purchasing in that it shows the reasons for various merchandising practices.

Standards Yearbook, 1931. Compiled by the National Bureau of Standards, GEORGE K. BURGESS, Director. Department of Commerce, Bureau of Standards Miscellaneous Publication No. 119. Washington, D. C.: United States Government Printing Office, 1931, pp. 399, $1.00.

This "picture of the standardization movement in various fields of industry conducted by certain national and international agencies . . . . contains outlines of the standardization activities and accomplishments of not only the National Bureau of Standards and other agencies of the Federal Government and the States, counties, and municipalities but also those of technical societies and trade associations." Special attention is given to current programs and methods. Included are a bibliography of recent publications on standardization and a series of articles on standardization in transport.

An Introduction to a Study of the Tariff. By IDELLA GWATKIN SWISHER. Washington, D. C.: Committee on Living Costs, National League of Women Voters, 1931, pp. 119, $0.40.

A readable discussion prepared for the League of Women Voters, but equally welcome to any intelligent layman who wishes to understand something of tariff problems as these affect the ordinary citizen and consumer.

The Tragedies of Progress. By GINA LOMBROSO. New York: E. P. Dutton & Co., Inc., 1931, pp. 329, $3.75.

The author of "The Soul of Woman," who is also the daughter of a famous Italian criminologist and the wife of the historian Guglielmo Ferrero, here attempts to "run down the myth of materialism" by a study of the history of countries in which, as in England, industrialism has triumphed, or in which, as in China, it has been consciously rejected. She reaches the conclusion that while the machine age presents great economic, social, intellectual, and moral dangers, these will be avoided if industry places itself on a basis of morality and justice by producing in proportion to a market regulated by natural demand instead of retaining its position of privilege in which it commits injustice, and abuses trust with impunity.

The Remaking of Marriage. By POUL BJERRE. Translation by T. H. WINSLOW. New York: The Macmillan Company, 1931, pp. 257, $2.00.

A "contribution to the psychology of sex relationship" by a well-known Swedish psychiatrist with wide experience in active practice who believes that while the traditional conception and authority of marriage are no longer universally valid, new ones are emerging based on a clearer understanding of its values, especially of the more spiritual ones. Education is needed to show how marital companionship and working together toward a common purpose satisfy the "basic ethical demands of the individual" even if they require surrender of less deep-seated though immediately urgent desires. The argument is enforced by examples drawn from the author's experience and by his familiarity with present-day psychology.

The Family in the Present Social Order. By RUTH LINDQUIST. Chapel Hill: The University of North Carolina Press, 1931, pp. 241, $2.50.

To be reviewed.

ABSTRACTS FROM PERIODICALS

CHILD DEVELOPMENT AND PARENTAL EDUCATION

EDUCATIONAL METHODS

A comparative study of measurements and qualitative ratings of nursery school children, ELSIE HATT. *Child Development* **2**, No. 1 (1931, March) pp. 1–29.

This study was undertaken at the Merrill-Palmer School to test the efficiency of the biogram, a group profile here described, which was devised to compare heterogeneous quantitative data concerning the individual child. The results showed the biogram for the most part efficient, although it did not measure social-stimulus-value nor cooperativeness, for which measures will shortly be added. It did disclose, however, that even the expert in child development is not competent to make truly objective judgments of children and that some quantitative test is needed to supplement and check subjective judgments.

The sand box, OLIVIA LIEBHEIT URE. *Child Welfare* **25**, No. 10 (1931, June) pp. 591–593, 632.

Typical play experiences of the preschool child over the sand box are described to show the possibility it holds for developing resourcefulness, creativeness, and desirable social attitudes. Suggestions are made for procuring it at minimum expense and for locating it where it will give maximum educational returns for the child.

Efficiency of the Vineland Adjustment Score Card for measuring social behavior, P. J. OOSTHUIZEN. *J. Educ. Research* **23**, No. 4 (1931, April) pp. 280–287.

The results of a test of the adjustment score card evolved by Lloyd N. Yepsen in 1928, made in the Robert Bowie School at Tempe, a "poor-white" area of Bloemfontein, South Africa, show that it provides a technic for the quantitative measurement of social behavior which is free from subjective opinions, does not test intelligence, measures the individual's behavior in relation to his particular environment, and is reliable in that it yields consistent results.

Opportunities in teaching young children, MARGARET C. HOLMES. *J. Nat'l Educ. Assoc'n* **20**, No. 5 (1931, May) p. 158.

Significant changes during the past 15 years in the status of the kindergarten-primary teacher are reviewed to show the desirability of organizing the lower part of the elementary school into a kindergarten-primary division or unit as a means to better teaching and supervision, better salaries, a more desirable program of work, and more valuable research in this field. Opportunities for the teacher to whom the young child appeals strongly are shown to be unusually rich.

Educational play materials for the preschool child, MABEL H. ROBINSON. *Pub. Health Nurse* **23**, No. 5 (1931, May) pp. 219–221.

Since toys have potential educational value it is suggested not only that they be chosen with regard to safety, hygienic qualities, durability, and usability at the child's particular age, but also that in collecting them a variety should be included which will promote vigorous physical activity and skill in manipulation, encourage experimentation, and supply material for constructive, imaginative, and dramatic play.

The status of the new school, JESSE H. NEWLON. *Teachers Coll. Record* **32**, No. 7 (1931, April) pp. 608–618.

The important characteristics and achievements of the "new" school are summarized as follows: The attention of the teacher is focused on the developing personality of the individual; a new concept of school as a social institution is slowly emerging; the narrow old-school curriculum is giving way to a wealth of new material; methods used are designed to challenge thinking; procedures are adapted to the capacities and interests of the individual child. Weaknesses cited as needing immediate attack are that the new school often exhibits ineffectiveness of teaching, traceable largely to its experimental nature; that the doctrine of interest has been misunderstood; that plans for the work of pupils have been inadequate; and that it tends to develop an undesirable individualism in place of an interest in general welfare.

MENTAL HYGIENE

Stuttering, SMILEY BLANTON. *Ment. Hyg.* **15**, No. 2 (1931, April) pp. 271–282.

Physical hygiene, mental hygiene, and speech training are suggested cures for stuttering, which appears to be an intricate combination of organic, constitutional, and functional factors.

The mental causes of child accidents, HERBERT J. STOCK. *Ment. Hyg.* **15**, No. 2 (1931, April) pp. 283–289.

Because the worried, adventuresome, tired, unintelligent, or rebellious child seems more frequently involved in preventable accidents, general mental hygiene, as well as recognition of dangerous situations and training in safety habits, has an important rôle in reducing such accidents.

PARENTAL EDUCATION

A bird's-eye view of parent education, LOIS HAYDEN MEEK. *Parents' Mag.* **6**, (1931, June) pp. 19, 52–54.

After a clear statement as to the basic reasons for the accelerated interest felt in parental education by both parents and educators, a summary is given of parental education programs promoted by the Child Study Association of America, the A.A.U.W., the National Congress of Parents and Teachers in Iowa, Oklahoma, and California, as well as by certain private institutions which are doing exceptional work in this connection.

Why children go wrong, JESSIE C. FENTON. *Parents' Mag.* **6**, No. 6 (1931, June) pp. 22, 48–50.

The stories of delinquent boys as told by themselves suggest that too severe censure, extremely righteous indignation, unfavorable comparison of one child with another, stress upon the debt of gratitude children owe to parents for giving them life, suggestion that the child's place in the family circle has been forfeited, and meanness in matters of money and affection are common parental faults which contribute to delinquency.

PHYSICAL DEVELOPMENT

Metabolic rate in problem children, JOHN LEVY. *Am. J. Orthopsychiat.* **1**, No. 3 (1931, April) pp. 208–210.

A study of the metabolic rate of 225 children who had been referred to the child guidance clinic for behavior disturbances of an unusual nature was inspired by indications from the endocrinologist and the constitutionalist, work on basal metabolism with adult psychotics, and experiments on the relationship between emotions and metabolic rate. The average age of the children was 13 years, 11 months; and

121 cases came from broken homes. Ratings were obtained by means of the Benedict-Roth machine, and the Aub-DuBois standards were used in computing results. Conclusions, tentative because of lack of control of many essential factors, suggest a lack of relationship between intelligence and basal metabolic rate.

Early factors in the formation of personality, GERALD H. J. PEARSON. *Am. J. Orthopsychiat.* **1,** No. 3 (1931, April) pp. 284–291.

Intensive observations of the behavior of 72 problem children under 7 years of age were correlated with a number of possibly important events and relationships to help to answer the query as to whether such physiological factors as bath and feeding or the parent-child relationship exert more influence on personality formation in the first few years of life. The statistical correlation tends to show that if parent-child relationship is more important than events, reconditioning a trait does not tend to improve the integration of the total personality, and that physical events do not fix types of personality.

Case studies in developmental age, PAUL HANLY FURFEY. *Am. J. Orthopsychiat.* **1,** No. 3 (1931, April) pp. 292–297.

Case studies and paper-and-pencil tests were made of a group of 168 unselected boys from a Washington, D. C., grammar school in an effort to study as objectively as possible their changing interests and developmental age or maturity of general behavior. The individualistic, the gang, and the adolescent periods were definitely revealed, and increase in developmental age did not seem to proceed along a straight course but by fits and starts; hence, to solve the social problem of children will require distinct quantitative study for each of the periods.

Oral habits in children, WILLARD C. OLSON. *Am. J. Orthopsychiat.* **1,** No. 3 (1931, April) pp. 311–316.

Description is given of a method of measuring the prevalence of special oral, nasal, hirsutal, ocular, and aural habits. Data so collected suggest that in the case of children under 14 years, the occurrence of such habits is not affected by age but is influenced by sex, family history, imitation, fatigue, and nutritional conditions.

Handedness and ability, M. O. WILSON and L. B. DOLAN. *Am. J. Psychol.* **43,** No. 2 (1931, April) pp. 261–268.

The relation of handedness to intelligence and achievement was studied in a group of 975 sixth-grade pupils in the Oklahoma city schools. The dextrals appeared slightly superior to sinistrals in intelligence and achievement, and when equated in intelligence alone. The dextrals also appeared superior when handedness was correlated with intelligence, achievement, and chronological age. Sinistral girls ranked above sinistral boys.

Differential skeletal maturation in relation to sex, race, variability, and disease, WINGATE TODD. *Child Development* **2,** No. 1 (1931, March) pp. 49–65.

Need for a more comprehensive view of child development led to this study of skeletal differentiation in relation to sex, race, local conditions of life, individual variability, other measures of development, and the devastations produced by disease. Further study is suggested, although these data tend to show little if any uniform skeletal differentiation resulting from the above factors.

Intelligence and phonetic generalization, HERBERT A. CARROLL. *J. Appl. Psychol.* **15,** No. 2 (1931, April) pp. 168–181.

Investigation in a Brooklyn public school of the relation of intelligence to phonetic generalization through the medium of spelling shows that bright and dull children are affected differently by the length of word and the position of the syllable. The bright show less difficulty with the short word and more with the long than do the dull, and appear more likely to err phonetically. This last is explained on the theory that the bright have superior ability for phonetic generalization.

Mental age distribution in school progress, HOWARD J. BANKER. *J. Educ. Research* **23,** No. 4 (1931, April) pp. 273–279.

Seeking an index of student ability, the writer developed a curve showing the average "mental age" of students as determined for each year of school life from the first primary grade through college, that is, over a period of 16 years. The mean appears to be above the theoretical norm until the high school period where it begins to drop, indicating the rapid cessation of mental growth associated with the functional change of adolescence and supporting the theory of mental maturity.

A study of eyedness and handedness, NOEL B. CUFF. *J. Expt'l Psychol.* **14,** No. 2 (1931, April) pp. 164–175.

In this study of the meanings of the term eyedness and handedness, as well as of their relation to each other, 3 tests for eyedness and 9 tests for handedness were given to 237 children in grades 1 to 8 of the training school and to 109 college students at Eastern Kentucky Teachers College. The results revealed that individuals may be grouped as unstable eyed and equal eyed, and also as right- and left-eyed; that eyedness is not a form of behavior; that handedness is not adequately described by the terms right and left; and that there appears to be low correlation between eyedness and handedness.

K. K.

FOOD AND NUTRITION

Contributed by the staff of the Nutrition Section, Bureau of Home Economics, United States Department of Agriculture

Malnutrition in children. An attempt at standardization of a dietary, L. C. ROSENBERG. *Am. J. Diseases Children* **41,** No. 2 (1931, Feb.) pp. 303–336.

"Two groups of underweight children, each consisting of 25 subjects, were selected and matched according to age, height, weight, and sex. One was put on a special dietary (experimental) and the other on a representative American dietary (control), and the progress of one group was compared with that of the other at the end of a period of 6 months. The experimental dietary consisted of a quart of certified milk daily, a variety of nuts, whole grain cereal products 3 times a day and fresh fruits and fresh vegetables twice a day, meat and eggs being excluded. It is obvious that there was a preponderance of basic over acid-forming elements." Those on the experimental diet made 32 per cent more rapid gains in weight and 24 per cent greater increase in height, showed a much lower acidity of the urine, a diminution in the total number of bacteria in the stools, and slightly better nitrogen balance retention than the control group. Blood studies showed no differences for the two groups, and the psychometric studies and roentgen examination of the bones were not conclusive.—E.P.D.

The effect of cooking on the digestibility of meat, W. M. CLIFFORD. *Biochem. J.* **24,** No. 6 (1930) pp. 1728–1733.

The author has studied the rate of digestion in vitro of raw, underdone, and overcooked meat, using pepsin alone or pepsin followed by trypsin as hydrolytic agents and measuring the rapidity of hydrolysis by means of Sorenson's formal titration.

Raw meat was least easily digested, probably because the antienzymic properties of the animal tissues had not yet been destroyed.

Meat overcooked until quite brown throughout was more easily digested than raw meat, due to antienzyme destruction but less readily digested than underdone meat because of hardening of the protein. The meat most rapidly digested was that "which had been roasted or grilled until it was just red inside and with a moist surface when cut," probably because of the antienzyme destruction before the hardening effect of heat on the proteins had come into play. "It would seem therefore that for people with weak digestive powers or for young children the ideal form in which to administer animal protein is as an underdone roast beef minced after cooking."—C. H. M.

Heart block in pigeons, curative factor, C. W. CARTER. *Biochem. J.* **24,** No. 6 (1930) pp. 1811–1819.

Continuing the experiments reported previously (*J. Physiol.* **68,** 1929, Proc. 1.), the present work was undertaken to elucidate the factor or factors, the absence of which from the diet of polished rice gives rise to heart block. A diet complete in respect to its content of fat, protein, carbohydrate, and inorganic salts, even when supplemened by cod-liver oil, fails to protect the pigeon against this disorder. Addition of liberal amounts of vitamin B_1 and B_2 concentrates were also ineffective in preventing it. The fat-soluble vitamins A, D, and E, present in the ether-soluble material extracted from whole wheat and in cod-liver oil and butter, were also incapable

of clearing up an established heart block or of preventing its development. The unknown factor is present in wheat and in yeast, as is Williams and Waterman's B_3 factor but "until it has been found possible to obtain this factor free from the other constituents of the vitamin B complex it will be impossible to decide whether this is identical with the substance present in wheat and yeast on which the normal function of the heart depends."—C. H. M.

A quantitative comparison of the curative activity of torulin (vitamin B_1) upon the adult pigeon and the adult white rat, H. W. KINNERSLEY, R. A. PETERS, and V. READER. *Biochem. J.* **24**, No. 6 (1930) pp. 1821–1823.

Parallel tests upon pigeons and rats by a curative and protective method with torulin (B_1) preparations of different degrees of purity indicate that the B_1 factor for the two animals is identical and show that the dose of vitamin B_1 required by each is about the same.—C. H. M.

Maintenance nutrition in the adult pigeon and its relation to torulin (Vitamin B_1) I. C. W. CARTER, H. W. KINNERSLEY, and R. A. PETERS. *Biochem. J.* **24**, No. 6 (1930) pp. 1832–1843.

The authors give a comprehensive, critical review of the problem of vitamin B_1 standardization, pointing out the fact that weight maintenance of pigeons cannot be regarded as the criterion of vitamin B_1 content but should be considered as an index of the presence of the vitamin B complex. They believe that "until some chemical test is available, the curative test upon the pigeon or the rat is the only reliable means of standardization of food stuffs for vitamin B_1 in spite of the rather large variations shown by such tests."

The protective test is complicated by variation in the time of onset of symptoms and by the fact that after the 30th day of rice feeding, pigeons appear to need more vitamin B_1, because 3 to 4 doses of torulin given daily are not always sufficient to protect against symptoms. In adult pigeons feeding naturally upon whole wheat or polished rice, with or without supplements of marmite or torulin, a maximum, intermediate, and minimum weight and a rising, maintenance, or falling nutrition can be noted. One gram of marmite, equivalent to 4.3 day doses of vitamin B_1 daily will convert a falling nutrition upon polished rice at any point between maximum and minimum into maintenance. Torulin from the N/10 HCl extracts of norite charcoal does not provide maintenance even when 12-day doses are given daily. However, torulin from the 50 per cent alcoholic extract of charcoal gives maintenance nutrition when 6 to 8 doses are given daily. Recent improvements in the Peters' process of torulin concentration are given in detail—C. H. M.

Maintenance nutrition in the pigeon, II. C. W. CARTER, H. W. KINNERSLEY, and R. A. PETERS. *Biochem. J.* **24**, No. 6 (1930) pp. 1844–1851.

Since purified torulin from the N/10 HCl extract of norite charcoal (Peters' process) did not give maintenance nutrition of pigeons unless supplemented with some substance present in the acid alcohol extracts of charcoal or in marmite, the authors present evidence for a third factor, B_5, supplementing B_1 (antineuritic) and B_3 (Williams and Waterman's factor) for pigeons. This factor may be differentiated from B_1, B_3, and B_4 by the fact that it is stable to heating at 100°C. in the presence of N/2 NaOH for 35 minutes. Since B_5 is soluble in neutral lead acetate solution it cannot be identi-

cal with Rosedale's factor. Chick, Roscoe, and Reader have been unable to demonstrate the presence of vitamin B_2 in the acid alcohol extract of norite; therefore, the effect cannot be due to B_2. Whole wheat steamed for 5 hours was able to give rising nutrition when supplemented with small doses of B_1; therefore, B_2 is heat stable under some conditions. The authors warn that the same factor is capable of showing well-marked differences in behavior in different materials.—C. H. M.

The effect of H-ion concentration upon the precipitation of certain basic substances by phosphotungstic acid, R. A. PETERS. *Biochem. J.* **24,** No. 6 (1930) pp. 1852–1855.

The H-ion concentration at which phosphotungstate precipitates of certain bases appear, depends to a large extent upon the chemical constitution of the base. With most of the bases studied precipitation appears upon passing from a more alkaline to a less alkaline solution; with guanidine compounds this is reversed.— C. H. M.

The induction of tetany in rachitic rats by means of a normal diet, A. F. HESS, M. WEINSTOCK, H. R. BENJAMIN, and J. GROSS. *J. Biol. Chem.* **90,** No. 3 (1931, March) pp. 737–746.

"Tetany can be induced in rachitic rats simply by an abrupt change from a rickets-producing ration, high in calcium and low in phosphorus, to a normal ration of dried milk, or of dried milk and whole wheat. The fall in calcium in the serum which is brought about by this means, develops within 48 hours but is maintained for only a few days.

"This striking reaction is not due to an absolute nor to a relative increase of phosphorus in the dietary but to a sudden shift in the Ca:P ratio in the subsequent diet as compared to the preliminary diet. When this ratio of Ca:P is decreased from about 4:1 or 1.5:1 tetany ensues, whereas if it is decreased only to about 2:1 the fall in calcium and nervous symptoms do not come about.

"Attention should be directed to the effect of marked alterations in the constitution of dietaries, as such shifts may help to explain nutritional disturbances which are inexplicable merely from the standpoint of adequacy."

The effect of heat upon the biological value of cereal proteins and casein, A. F. MORGAN. *J. Biol. Chem.* **90,** No. 3 (1931, March) pp. 771–792.

The protein of cereals after toasting was found to be altered and less well utilized for the growth of rats. In biological value, the raw proteins determined by nitrogen balance on young rats according to the modified Mitchell method, differed significantly from the toasted proteins. "The digestibility of the toasted proteins was but little different from that of the raw, particularly in the older animals, and the unexplainable loss of nitrogen occurred chiefly in the urine, indicating that the change produced by the heat treatment lies probably in the assortment or availability of the amino acids absorbed."—E. P. D.

The inability of metals other than copper to supplement iron in curing the nutritional anemia of rats, F. A. UNDERHILL, J. M. ORTEN, and R. C. LEWIS. *J. Biol. Chem.* **91,** No. 1 (1931, April) pp. 13–25.

A study was conducted to determine the ability of copper, cobalt, nickel, zinc, and manganese to supplement iron in curing nutritional anemia of rats. It was found that purified iron alone failed to prevent or cure the anemia, but when copper supplemented this element cures

were effected. Supplements of cobalt, nickel, zinc, and manganese with the iron proved ineffective. Methods are given for the purification of the metals used in these experiments as well as a description of the glass cage.—E. P. D.

The effect of large doses of irradiated ergosterol upon the ash content of the femora of young and adult rats, J. H. JONES and G. M. ROBSON. *J. Biol. Chem.* **91,** No. 1 (1931, April) pp. 43–56.

These workers found that the administration of toxic doses of irradiated ergosterol did not produce a significant demineralization of bone in adult rats and did not decrease the absolute amount of ash in the femora of growing rats although the relative amount of ash might be slightly decreased. On the basis of these facts and contrary to the theories of other investigators, it appears that irradiated ergosterol in extremely toxic doses "has no specific action which results in actually withdrawing calcium salts from bone comparable to its ossifying action when given in therapeutic doses."—E. P. D.

The mineral, nitrogen, and fat content of some varieties of mature bean seed and of string beans, J. S. MCHARGUE and W. R. ROY. *J. Nut.* **3,** No. 5 (1931, March) pp. 479–481.

The mineral, nitrogen, and fat content of a number of varieties of seed and string beans are reported. Beans in general were found to have a uniformly high mineral content, the hulls having a larger proportion than the seed. The calcium, magnesium, and phosphorus content was found to be high, while copper, manganese, zinc, and iron were present in fair supply. Bean protein, heretofore considered poor because of its low cystine content, was found to have a higher percentage of sulfur than protein from animal products.—G. M. D.

The validity of family coefficients, E. P. CATHCART and A. M. T. MURRAY. *J. Nut.* **3,** No. 5 (1931, March) pp. 483–489.

The validity of the ordinary values for family coefficients has been questioned on the basis of tests made on 5 British families. In the distribution of calories the man consumed on an average of 12 per cent more calories than the calculated man value. These additional calories represented a 19 per cent increase in protein intake and a 25 per cent increase in fat. The food consumption of the mother was found to be 21 per cent below the commonly accepted man value and 29 per cent below the actual. In terms of an actual man value of one, the coefficient of the mother was 0.70 instead of the generally accepted figure 0.83. The coefficients for the children, which in this study were relatively few, also differ appreciably from coefficients commonly accepted.—G. M. D.

HOUSEHOLD EQUIPMENT AND MANAGEMENT

Standardization and factory production in the building of low cost homes. *ASA Bull.* No. 59 (1931, March) pp. 3–8.

A discussion of the problems involved in applying standardization and mass production to home building. Actual studies and demonstrations (as that at Forest Hills Gardens, Long Island, New York) have shown that adoption of such methods would effect great cost reductions with the added advantages of improved design, absolutely fire-proof construction, and greater durability.

The American dwelling house, LEWIS MUMFORD. *Architecture & Eng.* **105,** No. 2 (1931, May) pp. 53–58.

The purpose of the modern dwelling is primarily biological. Orientation for sunlight and ventilation provides maximum sun in kitchen, living room, and nursery, a secluded porch for sun baths, and gentle draughts. Shade trees and a minimum of pavement make for summer coolness. Floor space should not be divided into small rooms but kept flexible to provide space for recreation. Cellars are still needed. For ease of cleaning, floors should be of a compact, resilient material that can be washed or waxed; walls, of close texture, dull finish; furniture, simple, durable, easily cared for, flexible in use. Rugs belong only in living and bed rooms; china closets and wardrobes speak too plainly of a single purpose. The modern architect provides drawers set in a closet, all the dressing room utilities in a dust proof closet behind sliding doors; there is less need of beds which fold away, since a good day bed is capable of 24-hour service. For decoration, wide windows open to the garden and, within, flowers, pictures, people. "The modern house is built not for show but for living; the beauty it seeks to create is inseparable from the personalities it harbors."

The small house of today, WALTER GROPIUS. *Architectural Forum* **54,** No. 3 (1931, March) pp. 266–278.

The author, a distinguished German architect, discusses the requirements of modern housing with its emphasis upon "function." It is characterized by opened walls, light structure, clearly defined simple forms, and harmonized proportions of all the building parts. Standardized units are used to a large extent, without sacrifice of character or individuality but with great saving in time and cost. Increased factory production of parts is anticipated, with reassembly on the site for dry mounting in the shortest space of time, irrespective of season and weather conditions. Interesting photographs and plans of such German houses are shown.

The small house reference number. *Architectural Forum* **54,** No. 3 (1931, March) Part II, pp. 364–398.

Well-illustrated articles which show modern trends in small house construction, financing, kitchens, bathrooms and sanitation, heating, and lighting.

Hauswirtschaftliche Beratung und Hausbau. [Advisory work in household management and home building.] ELLI HEESE. *Hauswirtschaftliche Beratungsdienst* **2,** No. 2 (1930, Feb.) pp. 1–2.

The rôle which housewives demand as advisers in matters of home building has not yet been assigned to them, in spite of the increasing realization of its necessity. The main obstacle is probably the objection raised by architects, that for such

collaboration technical knowledge as well as practical experience is necessary, and that the demands of the housewives are not concisely stated. The average housewife cannot be expected to acquire the necessary knowledge; her representative should be the household consultant ("hauswirtschaftliche Beräterin") of the housewives' associations, who should keep in touch with the work done by various public agencies in this field and interpret it to the housewife.

Housing & Bldg. **3,** Nos. 1, 2 (1931), Congress Pub. No. 1, pp. 88.

Recent housing developments in Berlin, Breslau, Prague, Dresden, Leipzig, Halle, and the industrial districts of central Germany are authoratively discussed with information as to construction costs, rents, and financing, illustrated by means of 160 photographs, detailed house and regional plans.

Portable steel and copper house developed in Germany. *Iron Age* **127,** No. 7 (1931, Feb. 12) p. 548.

An all-metal bungalow of simple design, furnished with sections composed of modern frames with an outside covering of copper sheets, with pressed steel sheets with a formal raised design for the walls of the rooms, and with space between for insulating material, has been developed to sell for about $1,000 exclusive of plumbing and other installations. The principal labor in erection is drawing up the tie bolts which join the sections. Designed for mass production and low cost, it has considerable permanence; and if demand justifies, more elaborate architectural designs seem possible.

The house of the future, DOUGLAS HASKELL. *New Repub.* **66,** No. 858 (1931, May 13) pp. 344–345.

The walls of the future house will probably be one- or two-inch sheets of insulating material enclosed in sheet metal, or of aërated clay or cement, glazed so as to be waterproof, made up into large, light units; the windows will be larger but fixed and well insulated, since the air-conditioning system will make them useless as ventilators. Standardized unit kitchens and bathrooms designed for efficiency, even mass production of houses, seem inevitable and should result in houses twice as good at half the present cost.

Three houses to be cooled with gas, E. D. MILENER. *Gas Age-Record* **67,** No. 14 (1931, April 4) pp. 491–492.

Following two years' preliminary research, three houses, one on the Atlantic seaboard, one in the middle west, and one in the extreme south, have been equipped with the silica gel gas air-conditioning process and operated under practical test conditions through the summer. Air-conditioning in summer differs from the winter process in that the air must be cooled and dehumidified rather than warmed and moistened, before cleaning and circulating.

Insulation helps build house-heating load, H. E. JANSEN. *Gas-Age Record* **67,** No. 18 (1931, May 2) pp. 671–672+.

A method of blowing rock wool into the walls of old houses has proven effective in reducing heating costs 30 to 40 per cent and in markedly lowering summer temperatures. Gas companies feature combined installations of conversion burners and house insulation in competition with cheaper fuels for house heating.

The use of gas for house heating, H. B. JOHNS. *Heating-Piping & Air-Conditioning* **3,** No. 4 (1931, April) pp. 330–334.

Discussion with illustrations of the

various commonly available types of equipment for gas heating, including conversion burners, their installation, probable cost of operation, and care. Gas-steam radiators, warm-air-circulating heaters, and gas-fired unit heaters are also described.

Air as you like it. *Housing* **20,** No. 1 (1931, March) pp. 14–23.

A comprehensive discussion of "manufactured weather" based on the present conception that the object of ventilation is not to keep down the amount of carbon dioxide but to reduce excessive temperature, maintain suitable humidity, and keep air in motion. The author points out that emphasis should be placed on a standard for health rather than comfort and quotes at length the work of Major S. M. Corbett, who believes that in a few years conditioned air will be considered as important as pure water is today.

Heat where you want it when you want it. *Housing* **20,** No. 1 (1931, March) pp. 24–26.

Description of the "air-way aeriet," a heating device with a motor-driven fan which draws in the air, passes it over the heating element (either electrically heated or connected with the hot water or steam pipes) and projects it into the room again at the living zone, thus increasing heating efficiency and saving fuel. The motor may be operated at varying speeds, allowing a wide adjustment of temperatures. At maximum speed, it is claimed to have four times the heating capacity of a concealed element of the same size.

Denmark points the way for central station heating. *Housing* **20,** No. 1 (1931, March) pp. 28–30.

A new form of insulating material, "cell-concrete," a mixture of cement and sand to which is added a foam which causes the mass to become honeycombed with air cells, has proved so efficient for heat transmission pipe lines as to revolutionize the possibilities of central heating stations.

Factors governing baking results in gas ranges, DOROTHY E. SHANK. *Am. Gas Assoc'n M'thly* **13,** No. 5 (1931, May) pp. 217–220.

Certain physical and chemical factors which affect baking results even under uniform temperature control are pointed out and discussed in view of recent laboratory findings. The physical factors considered are: (1) Construction of the stove. Effect of the amount of convected and radiated heat produced in the oven upon the pan used in baking. (2) Effect of heat on glass utensils. Glass has a low power of reflecting radiated heat, metals a very high power; hence, food bakes faster in glass, cools much more slowly. In an oven providing little radiant heat, glass would be slower than metals since it conducts heat more slowly. (3) Effect of heat on metals. A baking test where the only variant was the metal on which cookies were baked, aluminum, unpolished steel, stainless steel, tin, steel with ground coat of enamel, and steel coated with white enamel showed marked color differences, all the polished surfaces giving lighter products than the one unpolished. Cookies baked on enamel were darker than those baked on other polished surfaces, and the lighter steel square gave a lighter product than the dark steel. Thus, the color of the utensil, its reflective power, and its heat absorbing efficiency affect the color of the product. Selection of the pan used should be determined by the type of crust desired, and the choice of material for a given pan

by the length of the cooking process involved. (4) Position of pans in the oven affects the circulation of heat and thus the uniformity of results. (5) Shape and size of pans in relation to amount of food. (6) Effect of atmospheric pressure (important at altitudes above 4,000 feet). (7) Humidity, while theoretically important was found negligible under average home conditions.

English manufacturers sell standard electric stove. *ASA Bull.* No. 58 (1931, Feb.) p. 9.

The British Standard Cooker, designed for mass production by a group of firms which produce nine-tenths of the electric stoves made in England, is a simple, reliable appliance of standardized construction with easily replaceable and inexpensive parts, sold at a relatively low cost, and unique as a project in standardization.

Kommiteen for standardisering av Kjökkener. [The committee for the standardizing of kitchens.] *Elektroteknisk Tids.* **44,** No. 10 (1931, April 1) p. 147.

The Engineering Society and the Architectural Association of Norway, together with the leading women's associations, have appointed a committee for the purpose of working for the standardization of kitchens.

Die Nachprüfung elektrischer Kochplatten nach der Verdampfungsmethode. [The testing of electrical hot plates by the evaporation method.] *Elektrotechnische Z.* **52,** No. 11 (1931, March 12) p. 355.

The usual method for determining the efficiency of electric hot plates has been to raise the temperature of a definite quantity of water, commonly from 20°C. to 90°C. Opacki points out that in this procedure the effect varies with the quantity of water used, and that no account is taken of the loss of heat. He has, therefore, developed a new method in the kitchen laboratories of Vienna Municipal Electrical Works, which is based on complete evaporation of the water. Starting with the plate unheated, 0.07 liter of water is evaporated 10 times in succession on the plate to be tested, the current used is metered, and the time noted with a stop watch. Usually, after the second or third evaporation period the time spent is uniform and can be used as a basis for estimating the efficiency of the plate. Considerable care in observing the evaporation process is needed, as the time consumed is short.

Fuels used for cooking purposes in Indiana rural homes, M. RAPP. *Purdue Univ. Agr. Exp't Sta. Bull.* 339, 1930, pp. 32.

The most important fuels used, as determined by the questionnaire method, are coal, wood, and kerosene. Thermal efficiencies of cooking fuels for surface burners are: coal 5.3 per cent, kerosene 33.5, gasoline 40.3, artificial gas 51, and electricity 83.3. Little difference in the amount of fuel used in cooking a meal was shown between oven and surface burner methods of cooking; pressure cookers and waterless cookers saved appreciable amounts of fuel, though the saving was much less with coal than with kerosene, gasoline, and electricity. Insulated electric cookers saved 60 per cent over oven or surface burner methods of electric cookery. Electricity was shown to be the most desirable cooking fuel from the standpoint of cleanliness, heat control, and summer comfort. Though the cost of operating electric stoves is slightly higher than those using other fuels, this study indicates that this is compensated for by the saving of time required for care and cleaning of stoves.

Fundamentals of lighting in the home, classroom, and industry, A. L. POWELL. *Sight-Saving Rev.* **1,** No. 1 (1931, March) pp. 36–43.

It is shown that adequate illumination does affect visual acuity, that glare is more harmful than poor illumination, that dark walls and ceilings affect illumination adversely, that lighting fixtures require thorough cleaning to remain efficient, that the amount of light present may be accurately measured with a foot-candle meter, and that with expert advice adequate and artistic illumination is obtainable.

Daylighting in the home, W. C. RANDALL and A. J. MARTIN. *Transactions of the Illuminating Eng. Soc.* **26,** No. 3 (1931, March) pp. 275–286.

A study of the effect of different types of window curtains, shades, draperies, and screens in common use in homes upon the transmission of daylight into the room, shows, among other practical points, that full screens block out half the light, but those covering only the lower part of double hung windows only 15 per cent; that heavy glass curtains may cut off 40 per cent of the light, indicating the desirability of swinging rods or draw cords; that vertical illumination is twice as great as that on a horizontal surface at a given location in a room. Details of the apparatus used and manner of testing are presented, with many charts and photographs.

Kündigungsfristen im Haushalt. [Notice of discontinuance of household employment], FRIEDA FANNY SPITZER. *Deut. Hausfrau* **16,** No. 1 (1931, Jan. 15) p. 3.

In absence of other agreement, notice of discontinuance of household employment must according to German law be given by either party on the fifteenth of the month if it is to take effect at the end of the month. If employment is on a monthly basis, from the first to the last day of the month, notice must be given no later than the first day of the month before the contract is to terminate.

Appliance operating costs at a glance. *Elec. World* **97,** No. 17 (1931, April 25) p. 763.

A chart is presented from which the operating costs of various appliances at any given rate for current can be quickly computed.

The housewife comes into her own. *Housing* **20,** No. 1 (1931, March) pp. 51–57.

A description of the model kitchen for the average family set up by the New York Herald-Tribune Institute. The plan is an adaptable one and demonstrates two basic labor-saving principles: working surfaces adapted to fit the height of the worker, and the circular work space. Another demonstration is the "kitchen practical" of the Brooklyn Borough Gas Company which is to be reproduced in the United States exhibit in Berlin.

Rubber-backed carpets. *India-Rubber J.* **81,** No. 15 (1931, April 11) pp. 479–480.

A description of two recently developed forms of carpeting: (1) A woven carpet with a rubber back, manufactured only in 54-inch width in which the rubberized composition penetrates the pile and holds all the yarns so firmly in place that when cut it does not ravel; it can be joined invisibly; the back is waterproof and holds firmly to the floor; it suggests a Wilton weave in appearance and comes in a variety of colors. (2) Lea carpet, in which each pile fiber is held vertically

in the rubber base, is made of unspun animal fibers by a high-speed process at a unit cost lower than woven carpets but durable and equal in appearance to high grade velvet or Wilton.

Selling ice by meter, A. V. PANKEY. *Refrigerating World* **66**, No. 4 (1931, April) pp. 15–16+.

Me-TR-ice, a new service used by ice manufacturers to meet the competition of mechanical refrigerators, places the matter of re-icing entirely in the hands of the ice man who carries the key to the ice chamber which he services daily. A volumeter weighs the drip water from the refrigerating chamber which, of course, equals the weight of ice used and forms the basis for computing the cost. The meter dial is cumulative and furnishes records of ice consumed. Only well insulated boxes or "controlled temperature refrigerators" are accepted for the service. A thermometer set in the front assures the customer of suitable temperatures within the box. Ice to be used with food or beverages is kept in the food chamber of converted boxes or in a special compartment in the new refrigerators.

Die Arbeitsverteilung in der bäuerlichen Hauswirtschaft. [The distribution of work in the rural household.] DR. DERLITZKI and DR. AENNE VON STRANTZ. *Die Technik der Landwirtschaft* **11**, No. 12 (1930).

In this progress report of a study of the work of rural housewives, it is estimated that on a farm of less than 20 acres the distribution of the work of the housewife will be as follows: dairy work 24 per cent, care of chickens and other small animals from 12 to 15 per cent, gardening 3 per cent, housework 58 per cent. Because of the complex and broken character of the work, a decidedly chaotic and restless working situation results, which fatigues the housewife because the quick change from one type of work to another requires constant physical and mental readjustments.

The efficiency of the home laundry plant, EVELYN H. ROBERTS. *Wash. State College Agr. Exp't Sta. Bull.* 248 (1931, Feb.) pp. 39.

The equipment and materials considered necessary for efficient home laundry work are listed and the processes discussed. The method approved includes a 5- to 10-minute soaking in softened water, 15 minutes agitation in hot suds in the washer, one hot and one cold rinse, no bluing, partial drying, and ironing at suitable temperatures. The expenditure of more than 1.6 hours per person per week in home laundering work indicates need for reorganization of equipment and procedures. The cost of equipment, interest, depreciation, and materials, plus the value of the housewife's time, is shown to be only a little less than the cost of the same service from a power laundry. It is felt that if standards of the local power laundry are high and the family income permits, its substitution should be considered.

H. R. H.
M. C. H.

TEXTILES AND CLOTHING

Contributed by the staff of the Division of Textiles and Clothing, Bureau of Home Economics, United States Department of Agriculture

Textile fabrics for military purposes, H. KIRSNER. *Am. Dyestuff Rept'r.* **20,** No. 8 (1931, April 27) pp. 268–272.

Two years' investigations made by the War Department of the fastness of colors on cotton cloth showed that vat colors were fast on cotton only if proper penetration had taken place. If not, the olive drab cloth invariably became white upon scrubbing, a treatment which it must meet in service. This fault could be rectified by requiring the exclusive use of combed yarns, 2-ply, in order to bury the tips of the fiber in the yarn, and specifying full mercerization and bleaching preliminary to the dyeing operation to insure good penetration of the dye.

Accordingly, bids were sent out specifying a combed yarn, 2-ply, twill weave, olive drab cloth of not more than 6 ounces to the yard, with a tensile strength of 115 in the warp and 80 in the filling, which would be fast under all conditions incident to military service, including that in the tropics, and to washing under all conditions. The color fastness specifications required fastness to boiling and to scrubbing with a brush using powdered washing soda or laundry soap, to oxidizing agents, and to 30 days' exposure to the weather.

The manufacturers objected strenuously to the specifications, claiming that it was impossible to manufacture a cloth which would meet these specifications, and that the cost would be prohibitive if it were attempted. Specifically, they held that the tensile strength required could not be obtained in such light weight cloth. The Army, therefore, arranged for experimental manufacture of 8,000 yards and obtained goods with a tensile strength of 185 pounds in the warp and 112 in the filling (40 per cent stronger than specified), at a cost of less than 50 cents a yard. This successful demonstration convinced manufacturers that the specifications were practicable, and competitive bids were made at the very satisfactory prices of 42 and 43 cents a yard.—O. H.

Drapery printing, FRANCES CUSHING HALL. *Good Furniture & Decoration* **36,** No. 4 (1931, April) pp. 185–186.

The various methods of printing draperies result in slightly different effects. Although the machine brings well-printed materials into the medium price range, the subtle quality of those printed by hand is lost.

The oldest process for transferring the pattern to cloth is hand-blocked printing, which had its origin in the Orient. In this, each color is applied with a block especially cut to carry that particular section of the design. The blocks are usually of maple and must be made small enough for ease in handling. The important factors in making beautiful block prints are the evenness with which the dye is spread on the block and the accuracy of the printer in placing his blocks so that the sections of the pattern fit absolutely when printed.

The process of screen printing, although partly mechanical, is controlled by the human element. The screens, which are large enough for a complete repeat the width of the goods, are made of fine silk net stretched taut and a separate one is used for each color. The design is traced on the net, and only the sections to be printed in the given color are left uncovered, the meshes in the remainder of the screen being filled with

paint. The dye is drawn across the screen and flows through the open meshes. Screen printing is excellent for large repeat designs for which rollers are very expensive.

Roller printing is entirely mechanical and is the least expensive method for small or medium-sized designs. The cloth to be printed is wound on a roller from which it is unrolled to pass over a large rubber cylinder. Small copper rollers on which the design is etched automatically press the dye on the cloth, one color after another, until all are applied. A roll of heavy cloth which passes under the material takes up the excess dye.

Each of the processes is completed by setting the dyes with steam or oven heat, washing, drying, and calendering.—E. K. B.

The upholstery of seventeenth century English furniture, KATHARINE MORRISON KAHLE. *Good Furniture & Decoration* **36,** No. 5 (1931, May) pp. 263–267.

Rich velvets, silks, and satins, worked with gold and silver threads, made the upholstered furniture of the late seventeenth century particularly notable. Many times the entire chair, including legs and feet, was covered, the appearance of the framework being considered less important than the fabric. Late in this period tapestries and embroideries, particularly petit point and point Hongrois, were sometimes substituted for the rich fabrics. Gimps, galons, braids, fringes, cords, tassels, and tufts were made in abundance and were used to outline the seams as well as to finish the lower edge of the chair. Until Queen Elizabeth's reign, the use of upholstery had been confined largely to palaces and homes of the nobility because of its costliness.—B. M. V.

Baby's clothing and bath, EDWARD LYMAN CORNELL. *Hygeia* **9,** No. 4 (1931, April) p. 333.

Good practical suggestions are here given for the kinds, quantities, and care of garments, bedding, and bath and toilet equipment needed for a new baby. —M. S.

Factors affecting the development of mildew on wool, R. BURGESS. *J. Soc. Dyers & Colourists* **47,** No. 4 (1931, April) pp. 96–99.

Mildew which develops on wool in storage consists mostly of mold fungi, bacteria being relatively inactive except when the wool is actually wet. Contact with cotton or other vegetable fibers enhances the liability to mildew, as the latter develops heavy growth at much lower humidity than does wool. The increase of mildew growth when alkali is present in wool is probably due to the fact that hydrolysis of the wool by the alkali increases the available food. The solubility of the wool is even more important than the alkali content in determining its liability to mildew. Presence of strong acids also favors mold growth. In damaged wool, the most seriously injured fibers are the first to be attacked by micro-organisms, especially by bacteria.

Chrome dyed wools were found to resist mildew development in 46 out of 49 samples. The chroming did not appear to lower the hygroscopic properties of the wool nor to poison the mildew organisms, but produced a distinct reduction in solubility in boiling water. About 150 chemicals were investigated for inhibitory effect on wool mildewing, of which only two were found suitable—sodium fluoride and sodium silicofluoride. Thorough washing to remove soap and alkali, low relative humidity, and the use of one of the fluoride com-

pounds are recommended when long storage is necessary.—O. H.

A study of Young's eriometer and its application in the grading of wool, H. J. McNicholas and H. J. Curtis. *Melliand* **2**, No. 12 (1931, March) pp. 1555–1556.

A new form of Young's eriometer (an optical instrument for the measurement of the average diameter of a group of fibers) is described which gives more accurate results and is more convenient to use. The average value of fiber diameters obtained by the improved instrument falls within two microns of the average of many individual measurements made with the microscope. Sets of wool standards are in use in industry based entirely on the average diameter of the fibers.—M. B. H.

An apparatus for measuring the thermal transmission of fabrics, H. F. Schiefer. *Melliand* **3**, No. 2 (1931, May) pp. 162–163.

Reproducible measurements of the thermal transmission of fabrics are made in one-half hour with a portable, inexpensive apparatus developed at the United States Bureau of Standards. The specimen to be tested is clamped over an iron disk. This is fitted into the opening of a vacuum jar with a heating coil placed just under the disk and the temperature of the disk maintained practically constant by means of an automatic device involving the use of a relay circuit. Observations are made of the temperature of the room, of the temperature of the disk-surface, of the current through the heating coil, and of the length of the intervals during which the current is on and off. From these quantities, the relative thermal transmission of the fabrics can be computed.—K. M. D.

The influence of laundering and exposure to light upon some washable silks, Marion Griffith. *Ohio Agr. Exp't Station Bimonthly Bull.* No. 147 (1930, Nov.-Dec.) pp. 179–181.

The study of which preliminary results are reported in this paper is to include tests of color fastness in pink, peach, blue, green, yellow, and violet specimens of several brands of washable silks, also physical and chemical analyses, and endurance tests of white silks. The materials so far analyzed include only silks branded pure dye. Blue and green showed the most fading in both laundering and exposure to light. Violet faded appreciably with the light but was little affected in laundering. Peach and yellow were only slightly altered by either treatment. The higher priced silks were of better construction, more evenly balanced as to warp and filling thread count, and showed higher breaking and bursting strengths than the less expensive brands. All the pure dye silks showed some weighting, the highest priced silk containing about one third as much as the least expensive. Greater decrease in strength was caused by exposure to light than by the laundering process. —M. B. H.

First aid in cotton sheet shrinkage. *Nat'l Laundry J.* **102**, No. 5 (1931, May) pp. 30–31.

In experiments here described hemmed sheets measuring 94 x 80 inches were all given the same washing process in a commercial laundry, but some were ironed lengthwise and others crosswise. Those put through the rollers lengthwise were found to shrink only half as much in length as those ironed crosswise, although the total area change was about the same. Furthermore, a loss in length or width from running a sheet through one way could be almost overcome by

putting it through the other way in the next ironing. Material of higher grade apparently shrank in length just as much as that of cheaper quality. Interesting graphs show the dimensional changes with each ironing. These results may possibly suggest a means of shrinkage control in hand-ironing.—K. M. D.

The adolescent and his clothes, FRANCES FRISBIE O'DONNELL. *Parents' Mag.* **6,** No. 4 (1931, April) pp. 20–21, 51.

The great demand of high school boys and girls for good-looking clothes is but one manifestation of the desire to appear attractive to the opposite sex. The need of self-confidence which the well-dressed feeling gives, is essential at the adolescent age when shyness so often causes suffering. The wise parent realizes, too, that the young person has independent wishes about his clothes and that he is often resentful when adult ideas are imposed upon him. Many times restrictions are made upon moral grounds when custom should decide the matter. The cost of clothing is a great worry to many parents because most children thoughtlessly ask for clothes far beyond the power of the parents to supply. The training of children in clothing selection should start early in order that they may grow in judgment and ability to adjust themselves to conditions.—A. C. Q.

The effect of atmosphere upon weighted and unweighted silk. *Textile Colorist* **53,** No. 628 (1931, April) p. 275.

Experiments made at the United States Bureau of Standards with tin-weighted and unweighted silks after various treatments and exposures to sunlight and storage at standard conditions (65 per cent relative humidity at 70°F) show that no deterioration results from exposures to standard atmospheric conditions over a period of two and one half months, even when acid or alkaline perspiration is applied. Exposure to sunlight causes a marked deterioration in both unweighted (but dyed) and tin-weighted silks, the loss in strength in 100 hours' exposure amounting to about 25 per cent for unweighted and from about 50 to 75 per cent for weighted silks. Acid and alkaline perspiration increase the deterioration under exposure to sunlight, so that the loss in strength in 100 hours' exposure is about 35 per cent for unweighted and from about 65 to 100 per cent for weighted silk. One undyed weighted sample showed disintegration similar to the dyed samples.—M. S. F.

Soundless fabrics for talking films, GEORGE RICE. *Textile Recorder* **48,** No. 573 (1930, Dec.) pp. 37–38.

This report of a visit to a Hollywood studio emphasizes the necessity of using noiseless textile materials for sound pictures. Fabrics without scroop and without starch of any nature are desired; the question of durability is not considered. Soft material such as satins, velvets, and velveteens are the favorites. In pile fabrics it is necessary to have the pile cut level all the way across, since the ridges formed in fancy rib effects produce noise when rubbed against each other.—M. B. H.

Reflections on the exhibition. *Textile Weekly* **6,** No. 156 (1931, Feb. 27) pp. 692–693.

Among interesting new fabrics developed in the British textile industry and brought out in the British Cotton Textile Exhibition, was a repp material with a rayon warp and a cotton filling, the use of rayon for the warp indicating a new combination of it and cotton; a towelling with a spun rayon pile which is highly

absorbent and has a soft, pleasing feel; and rayon moiré, a new velvet material, developed from rayon cord velvet, which, with a water-proofed back, is used for light-weight raincoats.—J. D. G.

Single-unit full-fashioned hosiery must not sacrifice existing advantages, M. C. MILLER. *Textile World* **79**, No. 8 (1931, Feb. 21) pp. 898–900, 927.

Five different types of heel construction used in seamless hosiery are described and illustrated. None of them fit so well as the full-fashioned heel because the circular machine is only capable of producing the same number of loops at the ankle, foot, and toe. The writer warns against sacrificing the superior fit of the seamed heel for the saving that might be effected in cost of manufacture, but believes that it should be possible to eliminate all manual operations in the manufacture of full-fashioned hosiery.—O. H.

MISCELLANY

"Sub-professionals." Dietitians, nurses, and others interested in the improvement of the rating of such "sub-professional" groups in the United States civil service will be interested in an article in *The Johns Hopkins Nurses Alumnae Magazine* for May, in which Clara D. Noyes states the nurses' case much as Miss Storms did that of the dietitians in the June JOURNAL.

Home Education. Helpful suggestions to parents for the training of children are found in the articles prepared as a regular press service and sent on request by the National Kindergarten Association, 8 West Fortieth Street, New York City.

Parent Education. The National Council of Parent Education has issued a mimeographed list, with prices, of the publications available at its headquarters, 60 East 42nd Street, New York City. It has also prepared for sale at 10 cents a copy, an unselected, non-annotated bibliography of books within its field published from January 1 to May 1, 1931.

Home Economics Study Course. A course planned for parent-teachers associations and other adult study groups for 1931 under the direction of Dr. Margaret Justin, chairman of the committee on home economics for the National Congress of Parents and Teachers, and based upon problems of home living, is outlined in the June *Child Welfare*.

United States Government and Patterns for Children's Garments. Commercial patterns for many of the self-help garments designed by the textile and clothing division of the United States Bureau of Home Economics are now available through the McCall Company, the Butterick Publishing Company, and the *Country Gentleman* Pattern Service. From the Bureau of Standards, United States Department of Commerce, comes Commercial Standards Bulletin CS 14–31, "Boys' Blouses, Button-on Waists, Shirts, and Junior Shirts," which gives the full text of the agreement reached by representative manufacturers, distributors, consumers, and the Department of Commerce establishing new standards effective June 1 for the number and location of buttons and anthropometric measurements for boys' blouses, button-on waists, and junior shirts.

Safety Education. "A Guide-Book for Safety Education" has been issued by the National Bureau of Casualty and Surety Underwriters, One Park Avenue, New York City, of which an introductory copy will be sent free on request. Of similar interest is the article "Statistics of Child Safety" by Albert W. Whitney in the January issue of *Safety Education*.

Preparing Girls for College Life. Realizing that their academic preparation does little to fit girls for college life outside the classroom, Dean Eugenie Andruss Leonard of Syracuse University has compiled a leaflet of suggestions from the replies of 203 freshman girls to questions about the problems they face in the eleven hours of their waking day not spent in class.

United States Office of Education. Recent publications from this branch of the United States Department of the Interior include Pamphlet No. 17, "Industrial Education Section of the Survey of the Buffalo Public Schools" by Maris

M. Proffitt, and Pamphlet No. 19, "Per Capita Costs in City Schools, 1929–30" by Lula Mae Comstock.

Posture and Physical Fitness. Practical suggestions for improving the posture and health of school children are given in the United States Department of Labor, Children's Bureau Publication No. 205. The authors, Dr. Armin Klein of the posture clinic at the Massachusetts General Hospital and Leah C. Thomas, director of constructive gymnastics at Smith College, base their advice largely on the results of long-continued, careful studies of children in public schools in Massachusetts.

Alcohol, Hygiene, and the Public Schools. A recent bulletin from the Department of Justice, Washington, D. C., gives a digest of state laws bearing on this question selected by the Division of research and public information of the Bureau of Prohibition.

Potato Chips. A simple test devised by specialists of the United States Department of Agriculture enables the careful buyer to select potatoes which are free from an excessive amount of soluble sugars induced by too low storage temperature, and which are thus likely to be suitable for use as chips.

South Carolina Food Research. A recent list of the publications issued since 1928 from the laboratory of the South Carolina Food Research Commission and the Department of Nutrition of the Medical College of the State of South Carolina in Charleston, includes 19 titles dealing with the iodine content of vegetables grown in South Carolina, the relation of iodine to metabolism, and similar problems in nutrition, especially in the South. Roe E. Remington is author or joint author of most of the reports.

"Name the Vitamins." The National Better Business Bureau has issued a circular urging that if vitamins are mentioned in advertising of food products, the kind present be specifically mentioned. The circular then gives a carefully prepared popular statement of our present knowledge of the distribution and nutritive value of the members of the "vitamin alphabet."

Progressive Trends in American Education. This theme was treated from the standpoint of psychology, curriculum content, external organization, public school administration, and practical-arts education at the annual conference of the faculty of the college of education, University of Illinois, with the superintendents of the schools of Illinois. The addresses are printed in a bulletin issued by the University in February, together with an introduction in which Walter S. Monroe briefly describes the educational situation which has stimulated widespread experimentation. The address by Arthur B. Mays on practical-arts education may be of interest to home economics teachers.

Education in the United States. Recent additions to the sections printed as advance pages of the Biennial Survey of Education in the United States, 1928–1930 are: Chapter VII, "Agricultural Education," by H. M. Hamlin; Chapter IX, "Music Education" by Osbourne McConathy; Chapter X, "Hygiene and Physical Education" by Marie M. Ready and James Frederick Rogers; and Chapter XXI, "Educational Boards and Foundations" by Henry R. Evans. These appear as parts of the United States Department of the Interior, Office of Education Bulletin, 1931, No. 20.

NEWS NOTES

GENERAL

National Conference on Rural Government. Rural government is the topic of the 14th annual American Country Life Conference to be held at Cornell University, August 17 to 20, 1931. Professor Dwight Sanderson is secretary of the local committee. Programs may be obtained from the American Country Life Association, 105 East 22nd Street, New York City. Other organizations also meeting at Ithaca at that time are the Community Workers of the United States, the Council of Rural Work of the Methodist Episcopal Church, the Guild of Master Farm Homemakers, and the National Council of Boy Scouts of America.

National Association for Nursery Education. The Fourth National Conference on Nursery Education will be held in Philadelphia, November 12 to 14, with headquarters at Mitten Hall, Temple University. The meetings will provide opportunity for discussion of issues of immediate concern to those working with young children and will be open to members of the Association. Persons trained for or professionally engaged in such work are eligible as active members and parents and others non-professionally interested, as associate members. Applications for membership may be sent to Christine Heinig, Teachers College, Columbia University, New York.

Libraries and Adult Education. At the conference of the American Library Association held in New Haven in June, "Parent Education" and "Adult Education in Small Libraries" were the two topics receiving special consideration at a round table led by Franklin F. Hopper of New York City.

National Conference of Social Work. At the annual conference in Minnesota, June 14 to 20, the home economists in social case work met for dinner on June 18 and next day joined with the division on the family for a discussion of their common interests.

4-H Club Camp. The fifth annual camp was held in the grounds of the United States Department of Agriculture, June 17 to 23. Among the speakers at the daily assemblies were Secretary Hyde, Mr. J. C. Stone of the Federal Farm Board, and Mrs. Jane Rippin, formerly national director of the Girl Scouts. This year the tents were pitched just south of the greenhouses, with a quadrangle in the center for games and the evening campfire.

Training for Federal Civil Service. The newly-appointed council of personnel in the United States Civil Service Commission took the initiative in arranging a conference in Minneapolis, July 14 to 17, between representatives of the federal government and some twenty universities, in the hope of shaping university courses to give better preparation for positions in the government and thus to attract to it a larger proportion of the more promising students.

General Education Board. Mr. Lawrence K. Frank of New York City, at present a staff member of the President's Committee on Recent Social Trends, has been elected associate director of education of the Board.

Textile Foundation Fellowships. The board of directors of the Textile Foundation have authorized the allocation of $100,000 to be used during the next two years for the establishment of fellowships in textile research, the aim being not only to accumulate needed information but also to increase appreciation of the value of such scientific research to the development of the textile industry. The secretary of the Foundation is Edward T. Pickard, chief of the textile division, United States Department of Commerce.

Austrian Chamber of Household Management. Dr. Marie Schneider, a member of the National Council of Austria, is reported to have introduced to that body a motion for the establishment of a "Hauswirtschaftskammer" to deal with household interests. The idea has been under consideration for some time, especially by the Federation of Austrian Women's Clubs, under the stimulus of their vice-president, Frau Gisela Urban. Under present economic conditions, it may be impossible to set up the desired central chamber, much less the series of local ones which it is hoped ultimately to establish; nevertheless, the introduction of the motion is expected to bring wider public recognition of the obligations of the state to the homemakers and their dual rôle as consumers and producers.

Belgian Training for Homemaking. One purpose of proposed Belgian legislation to raise the minimum working age for boys to 14 and for girls to 16 years, is to give girls more adequate training for homemaking before they enter gainful occupations. Another proposal is to require homemaking instruction, including practical work, for girls between 14 and 16 years of age.

London Institute for the Study of the History of Art. The University of London has recently announced plans for founding the Courtauld Institute of Arts for the study of the history of art in all its branches and for the training of art critics and experts.

NEBRASKA

University of Nebraska. Margaret Fedde, chairman of the home economics department, sailed for Europe on May 28. She will spend three weeks in Germany and Austria and six weeks in Russia, where she will be with a party arranged by the International Institute of Columbia University.

Matilda Peters, acting head of the home economics department, was one of the judges for the 1931 meat story contest of the National Livestock and Meat Board.

Mary Mason, head of the housing and equipment division, was in Chicago on May 23 for a meeting of the committee of the President's Conference on Home Building and Home Ownership which deals with kitchens and other work centers.

Bernice Elwell, head of the institutional management division, has resigned and this fall will marry Timothy G. Hornung of West Lafayette, Indiana.

At the final meeting of the Campus Club in the home economics building on May 13, Grace Morton and Bess Steele showed materials obtained in Europe.

Helen Jeffryes, new president of Omicron Nu, was a delegate to the conclave in Detroit.

The home economics faculty entertained all senior girls and graduate students of the department on May 16 at tea in the home management house. The beginning clothing classes entertained freshmen and faculty of the home economics department at an informal tea on May 22 in the home economics parlors and wore dresses made in class.

The advanced clothing classes made a tour of a prominent local fur factory to observe the various factors affecting cost

and serviceability of fur as well as its proper care, cleaning, and storage.

In the annual student meat judging contest in which contestants judged five carcasses, identified twenty-five cuts, and described the preparation of each for the table, Lea Lenger took first place, Ruby Newberry second, Louise Hornung third, and Georgia Wilcox fourth.

NEW JERSEY

North Jersey Home Economics Association. One hundred fifty members met at the Newark Athletic Club on June 4 for dinner and the annual business meeting at which Grace Cowles, president, presided. The program, arranged by Elsie Stark, included an address on "The Profession of Homemaking" by Demetria Taylor of the Good Housekeeping Institute and one on "The Discriminating Clothing Consumer" by Marion Stephenson of Cheney Brothers, who used living models to illustrate her talk.

The Walker-Gordon Company has invited the group to an October picnic at its new farms near Princeton.

Ada Bessie Swann and Elsie Stark attended the Detroit meeting of the American Home Economics Association.

Mercedes Torr of Elizabeth, E. E. Frost of Irvington, Laura Swaim of Maple Thode, and Mary M. Buckley of Paterson attended the meeting of the Department of Supervisors and Teachers of Home Economics of the National Education Association at Los Angeles.

New Jersey Agricultural College. *Extension Department.* Edith D. Dixon gave a course in child training at Rutgers this summer.

NEW MEXICO

Vocational Conference. The vocational teachers of the state will meet August 22 to 25 in Albuquerque. The theme of the program will be home visitation and home project work.

New Mexico Normal University, Las Vegas. Miss Woodward has conducted an unusually interesting class in children's and infant's clothing which sewed for real children and helped an expectant mother to prepare a layette.

Alice Sundt will teach in Simpson college next year.

State University. Mrs. Walter Simpson, head of the department of home economics, is spending the summer in graduate study at Iowa State College.

Ruth Bumpus of the University of Wyoming is visiting instructor in home economics this summer.

NEW YORK

New York Home Economics Association. *Central Western District.* The annual district meeting was held in Rochester at the Old Homestead with Treva E. Kauffman of the state department of education as guest speaker. Anne Jackman of Monroe Junior-Senior High School, Rochester, was elected president and Gladys Lum of Madison Junior-Senior High, secretary. An interesting tour of the city practice cottages was made to note especially how each house had been modified to suit the tastes and needs of its neighborhood. After the tour of inspection the home economics teachers returned to the Monroe High School practice house where a dinner was served by the group living there and Hazel Gabbard, director of the nursery school, described her work.

Eastern District. The annual meeting was held at "The Cookie Jar" in Saratoga. Reports of the State Convention were given.

Southern District. The president, Mabel Hastie was in the chair at the annual spring meeting at Ithaca. Martha Van Rensselaer welcomed the members to the University and Henrietta Straub, state president, was the speaker at luncheon. Lucy Maltby of the Corning

Glass Works spoke on "Teaching Children Table Courtesies through Participation in Meal Service" and a group of Cornell students under the direction of Beulah Blackmore gave a demonstration entitled "Putting Reason behind Style." Mrs. Speece of Binghamton was elected vice-president and Miss Kerr of Ithaca, secretary.

Teachers College, Columbia University. About ninety attended a supper for alumnæ and students in household arts arranged by the Helen Kinne Home Economics Club on April 22 at Whittier Hall. Informal addresses were given by Professors Judy, Baldt, Winchell, and Cooley; by Isabel Ely Lord, formerly director of the school of household arts at Pratt Institute; and by the following alumnæ: Laura Wing, Florence Willard, and Mrs. Edith Sarver Berges. After supper, the party adjourned to the Seth Low parlor where a bridge had been arranged, the proceeds of which netted nearly $200 for the household arts book fund which the Helen Kinne Club has established in the Teachers College Library. The chairman of this fund is Miss Evelyn Herrington, R. D. Glens Falls, New York.

Syracuse. Mrs. Della T. Lutes, formerly director of the Priscilla Proving Plant, is now director of the newly established home economics department of the Syracuse Washing Machine Corporation. Miss Ethel A. Wright, the assistant director, was consultant at the Priscilla Proving Plant and has taught household arts in Massachusetts.

OHIO

Akron. Lucille Davison of Garfield High School is working this summer at the University of Chicago on a plan for making a high school cafeteria the center of nutrition teaching for high school work.

In a combination art and clothing class, Bertha Pennington, a clothing teacher, and Dorothy Glover, art teacher, at Garfield High School, have completed two interesting series of plates of historic costume. Mary Louise Clossey and Abbie DeLay of South High School are developing a course in peasant costume, using marionettes made in the art class as illustrations.

Six adult classes in homemaking have been held during the year and were taught by the home economics teacher in charge of elementary work.

Elsie Maxwell has been released from public school supervision and will give full time to the University.

University of Akron. Opal Lynn and Frances Swan Henry were delegates to the Detroit meeting in June.

The foods classes have worked actively with city social service agencies. Representatives from the Red Cross, Family Service League, Jewish Relief, Catholic Service, and Salvation Army met weekly through the year with members of the home economics department for suggestions and discussions of better foods for charity baskets at a lower cost.

The marketing class planned the menus and made order lists for the summer Girl Scout camp and for a Girl Scout advisory convention in May. The director of the camp reported that the meals were of a splendid quality and that 96 people were fed at one-third less than had previously been spent for 75 people.

Beatrice Counts has resigned as instructor of foods and nutrition and plans to study.

Baldwin-Wallace College, Berea. Elizabeth Harding, '25, is dietitian at Lakewood Hospital, Cleveland, and Lillian Hunter, '29, at St. Thomas' Hospital, Akron.

Catherine Wilsdon, a senior in the home economics department, has been elected state president of Ohio home economics student clubs.

At a recent meeting the home eco-

nomics club elected the following officers for the coming year: president, Eleanore Miller, Cleveland; vice-president, Helen Riggs; secretary, Marion Peak, Avon Lake; treasurer, Virginia Radie. The club recently visited the Home in the Sky in the Builders' Exchange Building, Cleveland, where Florence LaGanke Harris, director, spoke to the girls.

Cleveland. Audubon Junior High School reports a most interesting open house. The home management class under the direction of Genette Wierman arranged the rooms of a house in a corner of a big study hall with furnishings gathered from all parts of the building. Posters exhibiting good arrangements of furniture were prepared and used as guides in placing the furniture; even dinner was on the table for a family of six. Young housekeepers in gay aprons escorted guests through the house, pointing out advantages of its arrangement. The home nursing class kept 35 to 40 children happy and content in a nursery while their parents visited the exhibits.

On Friday, May 22, 620 girls listened with interest to Adelaide Laura Van Duzer, supervisor of home economics in the Cleveland public schools, who spoke to them on "The Art of Being Agreeable." This was the last of a series of auditorium talks for which the various teachers in the building have been responsible.

Flora Stone Mather College. The household administration department entertained in the delightful chamber music hall of the new Severance Symphony Hall on Friday afternoon, March 27, for the Cleveland Hospital Dietetic Council, the Department of Health and Hygiene of the public schools, and the Cleveland Home Economics Association. The tea preceded a lecture on "The Relation of Diet to Teeth" by Dr. Martha Koehne of the University of Michigan, president-elect of the American Dietetic Association.

Frances K. Dolley has cooperated with the University nursery school in preparing an exhibit of children's clothing.

Home Economics in Business. Dorothy E. Shank of the American Stove Company attended the home service meeting in Toronto, May 29, to report on the work of the kitchen planning committee formed to suggest efficient arrangement, color harmony, convenient equipment, and working heights in home kitchens.

University of Cincinnati. Dr. Chi Che Wang has been appointed senior fellow of the Pediatric Research Foundation and assistant professor of biochemistry in the graduate school of the University.

Rosamond C. Cook gave a series of 12 lectures on economics of home and community during the summer session at Stout Institute.

Edna E. Lamson read a paper "What Happens when the Second Judgment is Recorded in a True-False Test" at the annual meeting of the Midwestern Psychological Association in Chicago.

The Ohio Restaurant Association invited heads of home economics departments in the state to attend its meetings in Dayton in May; and Elizabeth Dyer of Cincinnati, Bertha A. Titsworth of Ohio Wesleyan University, and June Kennedy of Ohio State University were present. A talk was given by Mrs. Linda Brown, director of Shillito's tea room in Cincinnati.

Miami University, Oxford. The home economics education staff entertained the group of 60 student teachers of the school year 1930–31 at a picnic on May 29 along the Scioto River. Several former members of the staff were present, among them Mrs. Henrietta Wahlenmaier Newell of New York City, Mrs. Margaret Tanner Ramey, and Mrs. Doris Horch.

Ohio University, Athens. Helen Lois Humphrey of the nursery school staff was married on April 24 to Arthur A. Deeter.

The home economics department is cooperating with the museum in developing exhibits on home, food, and clothing industries. The history of costume class, under the direction of Mariam Morse, is dressing figurines in costumes representative of those worn by outstanding women in history.

At the last college convocation of the school year, Maude Ryder, president of Theta chapter, Phi Upsilon Omicron, presented the scholarship cup to Margaret Keehne Davis, the sophomore majoring in home economics who had achieved the highest scholarship average during her first two years in college.

Mary Stalhler, a graduate student in home economics, is, under the direction of Dr. Phillips, evaluating current magazine articles on home furnishings for use in consumer education.

Dr. Florence Justin gave a report at the national conclave of Omicron Nu in Detroit in June on the child development research sponsored by that organization and carried on at Ohio University the past year.

Ohio State University, Columbus. Ruth Lindquist is teaching at the summer session at the University of Tennessee.

Hughina McKay and Eva E. Turnbull attended the summer session at the University of Chicago.

Extension Service. Blanche B. Bowers and Eunice Teal, assistant state leaders, attended the recent extension conference of state leaders and directors at the University of Nebraska. Ten members of the state staff and twenty county home demonstration agents were at the American Home Economics Association meetings in Detroit.

OKLAHOMA

Oklahoma Agricultural and Mechanical College. Under the direction of Mrs. Edythe Wallace, courses in methods in prenatal education and in adult home economics education were conducted for summer students. Mrs. Wallace has formed study groups for parents interested in problems of the preschool, the elementary school, and the adolescent age and also an evening discussion group for men and women in problems of home living.

The program of the summer conference for home economics teachers held at the college in June included such vital topics as meeting emergencies in the community, publicity for home economics, correlation of related science and related art with home economics, and problems in classroom methods.

An interesting and profitable two-day conference was held in connection with Better Homes Week. Beulah Shockey, associate professor of household arts, was in charge and members of the faculty and representatives of commercial concerns gave short talks and conducted discussions. Plans are now being made for a homemakers' week next spring.

Xi Chapter of Omicron Nu was represented at the Detroit meeting by Virginia Messenger, director of the nursery school, and Florence Gunsaulis, a senior.

Mrs. Lova Potts, graduate assistant in household arts, under the supervision of Miss Murray and Miss Lytle, recently completed a study of the home project in senior high school clothing classes.

As a part of the work in interior decoration, each graduate student is collecting material regarding the characteristic architecture, interior structure, furniture, furnishings, accessories, and landscaping of homes in some one country. Notes, tracings, and pictures, are assembled in a portfolio and used in round table discussion under the direction of Sara T. Murray, head of the department of household arts.

Many besides the enrolled students attended the household arts lectures given as a unit on home beautification and interior decoration. Specialists spoke on landscaping, low-priced interior finishes, fabrics and furniture, and modern architecture.

In a summer unit course in chemistry and cookery, Dr. Edith H. Nason of Syracuse University included metals and their uses in the household, colloids and food preparation, principles of food preservation, baking powders, technic of building recipes, changes and losses in nutrition during the cookery of vegetables and related science and foods, the last planned primarily for the conference of home economics teachers.

University of Oklahoma. Omicron Nu and Oikonomia, honorary home economics organizations, in May sponsored the second departmental dinner for both major and non-major students. Stunts by the faculty and students and explanations of the purposes of the two organizations made up the program.

The Oikonomia scholarship award to the home economics senior who makes the best record during her junior and senior years went this year to Gertrude Flanagan.

Zelma Patchin, president for 1931–32, represented the local chapter of Omicron Nu at the conclave in Detroit. The chapter has started a circulating library of the more recent home economics books.

Helen H. Hamill and Mrs. Frances E. Pendleton of the home economics staff attended the University of Chicago this summer and en route stopped in Detroit for the American Home Economics Association meetings and Omicron Nu conclave.

Greta E. Smith, director of parent education in the Oklahoma City schools, again offered a summer course in adult homemaking. There were two demonstration classes, one for discussing preschool guidance and one for adolescent problems. Lila M. Welch offered graduate work in home economics education, and Laura A. Miller in nutrition. In general the graduate enrollment was unusually good.

PENNSYLVANIA

Pennsylvania Home Economics Association. *Eastern District.* The Lehigh Valley Child Helping Conference discussed adjusting the environment to the child's needs at its twenty-second annual meeting. Dr. Lois Hayden Meek, William McAndrew, and H. Addington Bruce were the speakers.

Allentown. The home economics classes of the continuation schools taught by Florence Fogle cooperated in meeting community needs caused by unemployment by serving wholesome noon-day meals daily from December to June to children from the first six grades.

Reading. The technical boys of the 8A classes at Northeast Junior High School are required to take a term's work in clothing. The construction problem is to make an apron of heavy blue denim suitable to wear for shop work. The material is discussed as to kind, color, suitability, and durability, and then the boys perform the various steps of the work, separating into groups which alternate in the use of the machine.

Temple University. Dr. Marion Bell, a graduate of Wellesley with her doctor's degree from Yale University, has been added to the home economics staff to teach nutrition and applied science.

Home economics girls now secure their experience in cafeteria management in the dining rooms which are located in the basement of Mitten Hall, the beautiful new student activities building.

The practice house is also in new quarters this year. As a household adminis-

tration project, senior home economics girls helped in furnishing it.

VERMONT

Vermont Home Economics Association. The spring meeting was held in Burlington in March in connection with the state teachers' meeting. Interesting features of the program were an exhibit of cotton garments from the Cotton Textile Institute worn by home economics students from the University of Vermont and the Burlington High School and an explanation by Lydia Tarrant of the University of Vermont of the "share method" of teaching nutritive values of foods.

Extension Service. At the annual conference of home demonstration agents and club agents at the University of Vermont, March 5 and 6, Ann Beggs, home management specialist of the New Hampshire Extension Service, was the principal speaker; and a tea was given by the extension service to the home economics faculty and senior home economics students of the University.

Vermont Public Schools. Sixty students from various schools attended the annual state clothing contest held at the Vermonters' Club in Burlington this spring. They also visited the practice house at the University and were served a picnic luncheon prepared by home economics students at the University. The prizes offered in this contest are provided by the Vermont Home Economics Association.

Edna Amidon of the Federal Board for Vocational Education recently visited a number of Vermont schools with Miss Fairbanks and Miss Tarrant, state supervisors.

WASHINGTON

State College of Washington. Members of the home economics staff who attended the Detroit meeting are: Dean Harrison, Ethel Clarke, VeNona Swartz, and Evelyn Roberts. Miss Roberts visited colleges and universities on her way to and from Detroit. Dean Harrison, Ethel Clarke, and Maude George, a student delegate, also attended the Omicron Nu Conclave June 19 to 22 at Detroit.

University of Washington. Professor Effie I. Raitt, chairman of the committee on household management of the President's Conference on Home Building and Home Ownership, was in Washington early in July for a meeting of this committee.

Under the leadership of the Open Road, Nettie Larson, '26, is conducting a European tour this summer.

Bertha Shapleigh of Columbia University gave a series of lectures on the history of cooking at the University in May.

An exhibit of national costumes and historic textiles collected in Europe by Blanch Payne was held May 8 and 9. It included her private collection as well as the costumes, embroidery, and other textiles that she purchased for the University. The latter and two collections assembled by Miss Denny in 1927 and 1929 are used in courses in history of costume, needlecraft, home furnishing, and historic textiles.

The newest affiliation of the home economics department of the University is with Harborview (county) Hospital, where all instruction for nurses is organized in courses which carry university credit and the head dietitian, Mary Northrup, is recognized as a university lecturer.

Virginia Olcott, a graduate student, is making a study of hospital textiles in connection with the equipment at Harborview Hospital.

OUR CONTRIBUTORS

MABEL TRAVIS WOOD, a member of the staff of the National Recreation Association, is a contributor to many magazines and newspapers and has for several years conducted a department on family recreation in the *Parents' Magazine*. She is a graduate of Barnard College.

MRS. ELIZABETH MACDONALD was trained at Radcliffe College and the Massachusetts Institute of Technology and has taught in public schools and at Boston University. Her experience as director of the Bureau of Consumer Research at that University and previously of the Priscilla Proving Plant, as well as her present work as manager of the division of consumer research, Frigidaire Corporation, have given her unusual knowledge of the practices and possibilities of the home service work of utility companies.

SIBYL BROWNE has supplemented her work for the bachelor's degree at Teachers College, Columbia University, by study under Hamilton Easter Field, Othon Friesz, and Diego Rivera and in Europe. Now instructor in fine arts at her alma mater, she had previously taught at the State Normal College at Bloomsburg, Pennsylvania, and at the River Road Country Day School, San Antonio, Texas.

CLARA LEE CONE holds two degrees from Teachers College, Columbia University, and has been in Atlanta since 1920, first as head of the home economics department in the Girls High School, and now also as supervisor of home economics in the public schools. HELEN VALK had varied experiences in kindergarten, grade school teaching, and library work before deciding to study costume design and finally majoring in home economics at Michigan State Normal College, Ypsilanti. In 1927 she went to Grand Rapids to manage the cafeteria and work out special courses in the new Junior Vocational High School from which she sends her paper in this issue. MRS. STELLA V. COFFMAN received her academic training at Kansas State Teachers College at Emporia, the University of Kansas, and Columbia University and had teaching experience in the public schools of Kansas and in private schools for atypical children as preparation for her present position as director of the Southard School for Exceptional Children. She is the mother of three children. ISABEL BETZ, who holds a diploma from the school of home economics of Battle Creek College, taught home economics and managed the lunch room at Caledonia Centralized School, Marion County, Ohio, for two years before becoming an instructor of handwork and home economics in the Braille and Sight Saving Department of the Cleveland Public Schools. MRS. HAZEL THOMPSON CRAIG is a graduate of Drexel Institute with an M. A. from George Washington University, who, in addition to six years' teaching of clothing and art at Gallaudet College, has had summer experience as stylist in a New York dress manufacturing house.

MARTHA VAN RENSSELAER, director of the New York State College of Home Economics at Cornell University, past president of the American Home Economics Association, hardly needs introduction to home economists. It is in her capacity

of assistant director of the White House Conference on Child Health and Protection that she now interprets its relation to home economics.

CLEO FITZSIMMONS, after seven years' experience in a country bank and graduation from Iowa State College, was for a year field worker in a Purnell study of rural living conditions, then joined the Illinois Extension Service, where her present work with 4-H Clubs gives her the title of junior extension specialist.

RUBY SIMPSON did her undergraduate work at the University of Nebraska, received the master's degree from Iowa State College, and taught at both institutions before taking her present position in charge of the home management house at the Buffalo State Teachers College. THOMAS F. VANCE was noted in April, 1930, as joint author of an earlier study.

KATHERINE E. BRAITHWAITE, now supervisor of home economics in the Baltimore County schools, holds a certificate from the Maryland State Normal School, a B.S. from Teachers College, Columbia University, and an M.A. from the University of Minnesota.

MARY O'Leary, after graduating in home economics from Montana State College last June, had a summer's practical experience in the cafeteria of a high-class Chicago hotel and is now assistant manager of the Claremont Inn and the women's dining halls at Pomona College.

HELEN HACKETT sandwiched high school home economics teaching between work for her bachelor's and master's degrees from the University of Oklahoma and for the last year has been in charge of her department at the East Central Junior College, Decatur, Mississippi.

LEAH ASCHAM, before deciding to enter the home economics field, was a teacher of college mathematics. In 1918 she received a B.S. in home economics from Ohio State University and two years later went to Yale for three year's study in Dr. Mendel's laboratory. Before accepting her present position in 1928 as director of home economics research at the Georgia Experiment Station she was a biochemist at the Allegheny General Hospital and a member of the staff of Kansas State Agricultural College.